

621,322



**Guth** *Presents*

# ARCTIC DAYLIGHT \*

★ ARCTIC DAYLIGHT: Fluorescent Lighting at Peak Efficiency—attained by cooperation of Fluorescent Lamps with Guth *Diffuse* ALZAK Aluminum Reflectors of engineered design.

## FLU-O-FLECTORS and TRU-CO-LITES for Stores, Offices and Factories



High-Power-Factor ballasts are furnished in all Guth WIRED fixtures.

Prices in this catalog include full freight allowance on all single-lot-shipments of 100 lbs. or more to U. S. continent destinations.



SPEC. NO. 6  
HIGH P.F.  
BALLASTS

CATALOG No. 38 — A. I. A. FILE No. 31F23

MARCH 1, 1941 SUPERSEDING CAT. No. 37

The EDWIN F.



COMPANY

2615 Washington Avenue

SAINT LOUIS, MISSOURI

"Leaders In Lighting Since 1902"



**ARCTIC DAYLIGHT** — Is the theme for Better Fluorescent lighting defined as,

"The cool, brilliant, non-glaring, shadowless light, produced with the amazing new GUTH Luminaires."

**ARCTIC DAYLIGHT** is effected by cooperation of Fluorescent lamps with ALZAK aluminum reflectors. This means more light and a maximum effectiveness — an energizing atmosphere — a greater light "punch." GUTH lighting equipment has been well-known to the electrical trade for 38 years. We consider the line shown in this catalog as being worthy of the quality for which we are known.

**GENERAL CATALOG INFORMATION** — The items shown in this catalog include our up-to-date Fluorescent line. All Fluorescent items and catalog numbers not listed in this catalog have been discontinued, however, many of our old items can be obtained on special inquiry at a special price. Prices are subject to change without notice. Lamps are not included in any of the prices listed.

**FLUORESCENT ACCESSORIES** — All lampholders, switches, compensators, and ballasts furnished in our WIRED equipment are what we consider the finest accessory equipment available. Each WIRED unit is tested for shorts; wiring and switches are checked before fixtures are shipped. After transportation we recommend the equipment be checked again. Any defective ballasts, compensators, or starter switches will be replaced by us f. o. b. St. Louis within six months after equipment is shipped from here. We regret we will be unable to accept any labor charges or transportation costs in connection with the change of accessories.

**RETURNED EQUIPMENT** — If for any reason equipment is to be returned, please write in advance for permission; when granted, Return Approval Labels will be furnished to apply to the outside of cartons, same to be honored by our Receiving Department.

## ★ BRIEF DATA ON FLUORESCENT LAMP OPERATION ★

### THE FLUORESCENT LAMP—

**IT'S LIFE** — Essentially an arc lamp creating a flow of current through Mercury Vapor which produces the majority of its energy into ultra violet (non-visible) radiation, which activates phosphors coated on the inside of the bulb to produce light. The rated life of the Fluorescent lamp (except the new 100-Watt size) is 2500 hours. During the first 100 hours operation, light-output decreases nearly 10% and thereafter decreases very gradually until at the end of the lamp's rated life, the efficiency is approximately 85% of its rated lumen output (which is the output after first 100 hours burning of the lamp).

**ACCESSORIES NECESSARY** — Like all electric discharge arc sources, Fluorescent lamps require ballast (reactance) to "police" the flow of current. WIRED fixtures listed in this catalog are equipped with all necessary accessories for lamp operation. BARE fixtures are furnished less all accessories.

**CURRENT SUPPLY** — The Fluorescent lamp's operation is best suited for 110 volt, 60 cycle, A. C. (most WIRED equipment listed in this catalog is for this type circuit). The 30 and 40 Watt Fluorescent lamps will operate satisfactorily on 199-216 and 220-250 volts, 60 cycle, A. C., and accessories are available, (prices upon request). Operation for 50 cycle is practical although flicker is quite noticeable; operation for 25 cycle is impractical. Direct Current circuits are not recommended, however, with special auxiliaries (prices upon request) the 15 and 20 Watt Fluorescent lamps can be operated.



Our Engineering Department is pleased to submit lighting layout and recommendations for your store, office, or factory, at no obligation. Send us rough sketch showing area dimensions and ceiling height, also location of existing outlets. Mention type and wattage of lighting you are now using.

**POWER FACTORS** — Low-Power-Factor may be briefly explained as "wattage" that does not show on the meter, yet requires larger wire-carrying capacity and generating equipment. All GUTH Luminaires (furnished WIRED) include High-Power-Factor which means full utilization of the wiring system. In many states, a premium on the electric bill must be paid unless High-Power-Factor is utilized.

**FLICKER** — Flicker or stroboscopic effects can be minimized by use of the Tulamp ballast or use of three single-lamp ballasts connected on separate phases of a three-phase system.

**RADIO INTERFERENCE** — Fluorescent lamps may effect radio interference. However, in most cases this can be minimized or eliminated by (1) providing a good "ground" for fixture and radio, (2) moving aerial proper out of bulb and line radiation range, (3) use of grounded "filter" to eliminate line feed-back. Additional information will be forwarded upon request.

**AIR TEMPERATURE AND DRAFT** — Lamps operate at highest efficiency at normal room temperatures of 70° to 80° F. Exposed lamps at 32° F. temperature operate 65% efficient. Drafts will directly affect lamp efficiency by as much as 20 to 25%. See page 14 for more information on this subject.

**LESS HEAT — MORE LIGHT** — A cooler light source, actually 75% less radiant heat for equal light is due to the fact that in Fluorescent lamps a larger proportion of their wattage is turned into light (than other lamps).

**THE EDWIN F. GUTH COMPANY**

*"Leaders in Lighting Since 1902"*

2615 Washington Avenue

St. Louis, Missouri

NOTE: Use Telegraph Code—See page 25.



ALZAK IS MORE EFFICIENT  
... ALZAK IS PERMANENT

GUTH  
ALZAK

## Any LIGHTING EQUIPMENT

## Is Only As GOOD As Its REFLECTING SURFACE

When buying lighting equipment, first consider the REFLECTING SURFACE. Here is the most important portion of the Luminaire. It increases or decreases the effectiveness of your final lighting results. By cleaning the reflecting surface regularly, up to 50% more light can be maintained. Therefore, when buying consider the REFLECTING SURFACE. (1) Is it efficient? (2) Does it provide "punch" when used with the Fluorescent lamps? (3) Will it stand regular washings and retain its initial efficiency? We heartily recommend ALZAK as being the finest REFLECTING SURFACE available.

Good lighting calls for

# ALZAK ALUMINUM REFLECTORS

Until recent years, aluminum was "just another reflecting surface." With the advent of the now-famous ALZAK process, aluminum took its rightful position in the world of lighting. The ALZAK process removes impurities and foreign particles from the aluminum metal, increasing its reflecting value to 93%; then, a flint-hard film is deposited that provides life-time surface for GUTH reflectors. This film is not a simple baked-on finish but an actual deposit that withstands heat and weather elements to such a degree that we say in full confidence — "there is no better reflecting surface." Below we describe several of numerous tests recently made.



**GUTH ALZAK ALUMINUM** is Diffuse finish for best Light Diffusion and minimum of direct-glare. Diffuse ALZAK yields full-power and gives "snap" to Fluorescent light. In Guth's own ALZAK Processing Plant the efficient, tough ALZAK finish is applied after Reflectors are formed to provide better appearance and complete oxide-film coverage over the entire metal surface.

Other finishes for aluminum lack one of the two essentials for good reflecting surfaces — EFFICIENCY and PERMANENCE. ALZAK, and only ALZAK, gives Aluminum highest efficiency and flint-hard protection for life-time permanence.

**ABRASIVE RESISTANCE:** Besides unusual acid, heat, and caustic resistance, ALZAK is tough in another sense of the word.

To illustrate we picture, to the right, a polisher bearing-down with an ALZAKED reflector against a buffing-wheel to which has been applied Tripoli compound. It required 16-minutes continual pressure to break through the tough ALZAK film—and then only in spots. The aluminum metal melts before the ALZAK coating "breaks-down" under the polisher's high-speed wheel. Truly a remarkable performance of PERMANENCY. ALZAK IS TOUGH!



**SALT SPRAY TEST:** One of the severest tests under which ALZAK Aluminum has been subjected, was the Salt Spray of 20 per cent concentration for a 400-hour continuous period. Ordinary aluminum would be entirely eaten away by such a test. ALZAK, on the other hand, stood this test; after washing the tested surface with fresh water, there was evidence of pitting on the surface—yet the reflectivity was not appreciably decreased, and the reflecting surface still retained its tough coating which protected the full thickness of the metal.

**NO CHIPPING OR BREAKING:** Should an ALZAK reflector be struck or dropped from its ceiling position, it would become dented, but it would not break, chip or peel. In slight cases of denting, ALZAK reflectors can be easily straightened; most certainly, the highly-efficient reflection value would be unaffected.

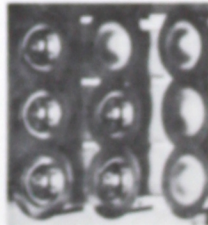
Maintenance of reflector-efficiency is very important to any-type lighting equipment. Regular cleaning, once a month, is recommended. This constant maintenance, where human contact is made regularly with the reflectors, necessitates toughness and durability. ALZAK "can take it."



**HOT SULPHURIC ACID** of 66-degree Beaumade concentration is as strong an acid as would be encountered even under unusual conditions. Therefore, an ALZAK Aluminum reflector was installed directly over the evolving fumes from this acid.

After subjection for a 12-month period, the ALZAK reflector was removed, and simply washed with soap and water. Careful examination disclosed minor pitting which is not progressive, nor does the protective coating chip or peel. Most important, the reflectivity value had not depreciated.

**ALKALI TEST:** Two sites were selected for this exposure test—Point Judith, R. I., a rocky promontory touched on two sides by the Atlantic Ocean and by a salt marsh on the third side; also New Kensington, Pa., in the midst of an industrial atmosphere containing Alkali, Gases, Sulphur, Smoke, Soot, etc. These locations are more severe than would be encountered by a lighting installation. At the end of 2 1/2 years exposure the unprotected ALZAK reflectors on test were cleaned with soap and water. Results showed no decrease in reflectivity or evident attack on the reflector. Photo to right, illustrates reflectors as mounted for this severe test.



**BLOW TORCH TEST:** Heat deteriorates ordinary reflecting surfaces. Painted surfaces are discolored; heat with age roughens their surface and dirt is absorbed. The practical solution for this problem is ALZAK — and here's why!

A 6-inch square piece of ALZAK Aluminum was placed in a forge, with blow-torch heat striking it full-blast. In due time, the remains were lifted from the forge. Result, the aluminum metal had entirely disappeared (aluminum melts at 1,200° F.) — still remaining, however, were the protective ALZAK film coatings.

**MAINTAINING ALZAK REFLECTORS:** Regular cleaning enables you to enjoy the higher reflectivity of ALZAK Reflectors continuously and insures their long life. When surface is merely dusty, washing with mild soap and water is sufficient. Where, however, collection of dirt is such to require more drastic cleaning, a mild abrasive (such as Bon Ami) may be used. Liquid wax or wax emulsion is very efficient for cleaning and maintaining an ALZAK surface. Caustic cleaners and harsh abrasives are to be avoided. Outdoors where soot and dust settle on reflector surface, cleaning at regular intervals with mild abrasive or liquid wax is recommended.



THE EDWIN F. GUTH COMPANY

ALZAK LICENSEES





## TRU-CO-LITE... "KING OF NIGHT"

TRADE MARK REGISTERED — PATENTS PENDING

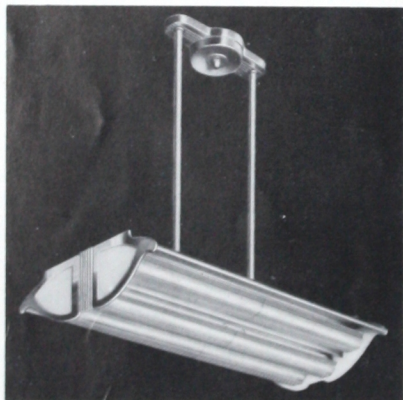


### For Offices (TO LEFT)

TRU-CO-LITE installation at the Federal Savings and Loan Association, Tulsa, Oklahoma. Architect for the installation was Mr. L. B. Senter of Tulsa. Mounted directly on 11'6" ceiling and 10'x10' spacings, TRU-CO-LITES with white lamps provide 45 Foot-candles of amazingly uniform illumination. TRU-CO-LITES are out of normal range of vision, and report since installation indicates complete lighting comfort and satisfaction.

### For Stores (BELOW)

TRU-CO-LITE installation at the Head Shoe Company retail store, Wichita, Kansas. Ten Guth TRU-CO-LITES are installed on 11'6" x 13' spacings and are mounted 11'0" from the floor. Each fixture has 4-40 watt White Fluorescent lamps and delivers an average of 30-Foot Candles on the Working Plane. Note the soft ceiling illumination afforded, and as customers come in the front door, the attractive cast-aluminum ends are in full view.

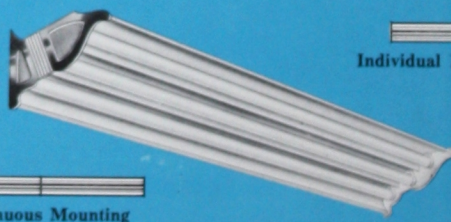


### DIFFUSED TRU-CO-LITE-ING

For office illumination in particular, it is suggested that Fluorescent lamps be diffused. The simplest, least expensive (initially and over a period of time) and most satisfactory method of lamp diffusion is use of "P-F-C" Plastic Diffusers (see Pages 14 and 15). Fixture above is M1802W with 8 "P-F-C"—10 Plastics snapped-on the lamps.



## TRU-CO-LITE WALL BRACKET



Individual Mounting

Continuous Mounting

The new Tru-Co-Lite Wall Bracket, with smart finished styling, provides general illumination with pleasant uplight. There are numerous applications and very interesting effects possible with the Tru-Co-Lite Bracket. It is a very flexible unit, for either 2 or 3-40 watt lamps, and can be mounted individually or in continuous runs.

The Tru-Co-Lite Wall Bracket has satin cast aluminum ends with polished highlights. Additional lamp lengths are furnished without ornamental ends. Each lamp has individual ALZAK Removable Reflector with "V" design behind lamps which prevents pocketing of light.

Tru-Co-Lite Spacings	Mounting Height	Area Conditions	Approx. Av. Ft.-Candles—White Lamps			
			Tru-Co-Lite 4-40 W.	Ditto With P-F-C's	Tru-Co-Lite 4-20 W.	Ditto With P-F-C's
7' x 9'	8'	Light	81	69	34	29
		Fair	78	66	33	28
		Dark	73	61	30	25
9' x 9' or 8' x 10'	9'	Light	65	54	28	24
		Fair	63	52	27	23
		Dark	60	50	25	21
10' x 10' or 9' x 11'	10'	Light	50	42	21	18
		Fair	47	39	20	17
		Dark	44	36	18	15
11' x 11' or 10' x 12'	11'	Light	42	35	18	15
		Fair	39	33	17	14
		Dark	35	29	15	13
12' x 12' or 11' x 13'	12'	Light	33	28	14	12
		Fair	30	25	13	11
		Dark	27	23	12	10

### FOOT-CANDLE RESULTS

Table showing average illumination (when at least four TRU-CO-LITES are installed) obtained with four 40-watt and four 20-Watt size TRU-CO-LITES, with and without "P-F-C" white Plastic Diffusers (see Pages 14 and 15). Above readings are with white Fluorescent lamps; multiply readings by .85 when daylight lamps are used. Foot-candle values are based on plane 32" above the floor.

Cat. No.	For Lamp	Fixture Size	Type	Ship. Wt.	List Price
M2150W	2-48"	48 1/2 x 7 x 7 1/2"	Base Length	24	\$44.00
M2152W	2-48"	48 1/2 x 7 x 7 1/2"	Add. Lamp Length	22	36.00
M2154W	3-48"	48 1/2 x 9 x 9 1/2"	Base Length	29	52.00
M2156W	3-48"	48 1/2 x 9 x 9 1/2"	Add. Lamp Length	27	44.00



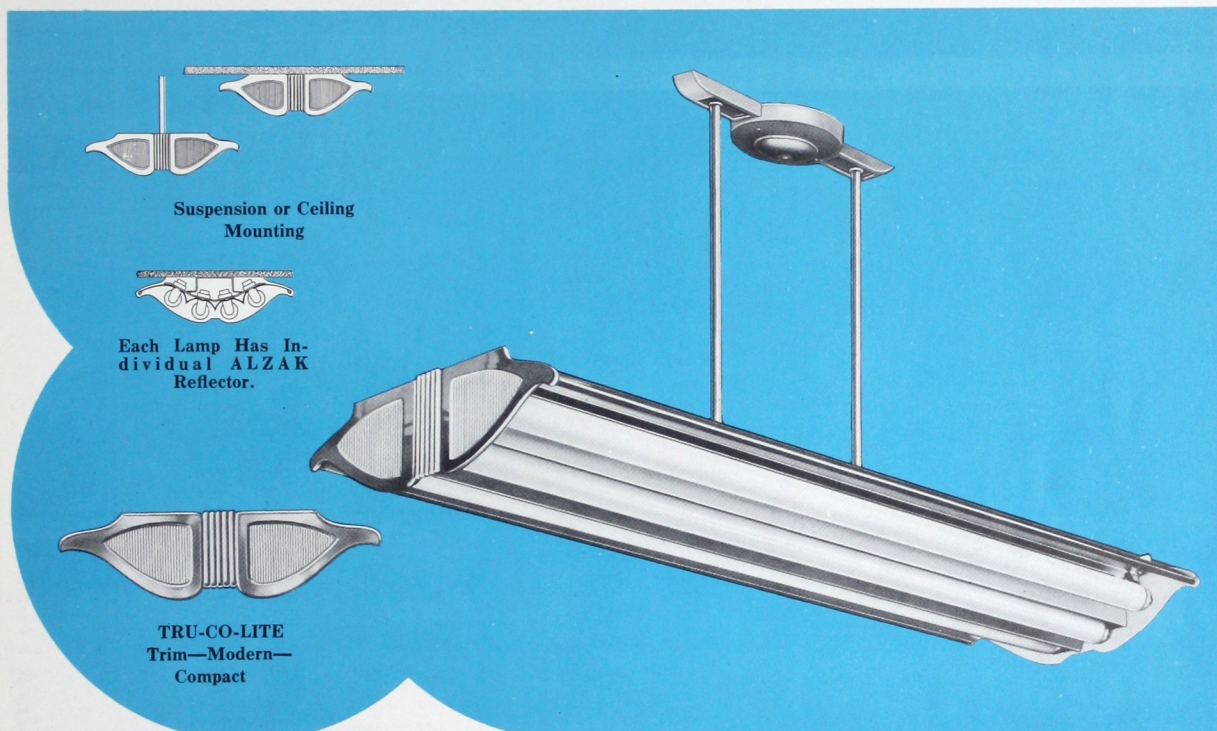
ALZAK IS MORE EFFICIENT  
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**GUTH  
ALZAK**

# Guth TRU-CO-LITE ... AMERICA'S OUTSTANDING LUMINAIRE

TRADE MARK REGISTERED — U. S. PATENTS PENDING

*Trim Compact Design—Direct-Indirect Luminaire—For Stem or Ceiling Mounting  
Reflectors ALZAK Aluminum*



LISTED BY UNDERWRITERS' LABORATORIES, INC.

**TRU-CO-LITE**—styled by Guth—represents the ultimate in design, efficiency and lighting effectiveness. TRU-CO-LITES are ideally suited for stores, offices, office buildings, hotels, theatres, restaurants, and other commercial establishments. TRU-CO-LITE'S trimness and compactness represent true modern design, and its neutral finish of Satin Aluminum with Polished Highlights blend with all architectural interiors. Units can be suspended from the ceiling, or attached directly to the ceiling.

## DIFFUSED LIGHTING

TRU-CO-LITES listed hereon provide direct-indirect illumination with Fluorescent lamps. For many applications it is desirable to diffuse the lamps. On Pages 14 and 15 are listed and described "P-F-C" Plastic Diffusers which "Snap-on" the lamp and provide diffused lighting with utmost efficiency.

## SUSPENSION TYPES—(WITH HANGERS)

Cat. No.	For Lamps	Fixture Body Size	Std. Lgth.	How Ship	Shg. Wt.	List Price
M1970W*	3-40W	48" x 16" x 5"	30"	Wired	31#	\$50.20
M1800W	4-40W	48" x 16" x 5"	30"	Wired	35#	54.65
M2160W†	8-40W	48" x 30" x 5"	30"	Wired	90#	145.00
M1802W	4-20W	24" x 16" x 5"	30"	Wired	21#	42.65

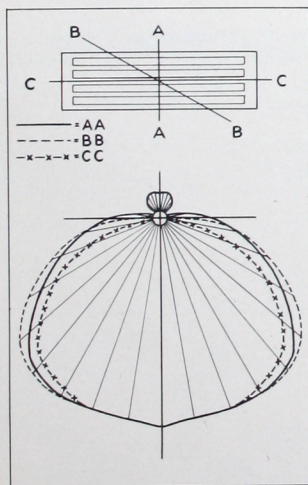
## CLOSE CEILING TYPES—(LESS HANGERS)

M1972W*	3-40W	48" x 16" x 5"	5"	Wired	29#	\$45.70
M1804W	4-40W	48" x 16" x 5"	5"	Wired	33#	50.15
M2162W†	8-40W	48" x 30" x 5"	5"	Wired	80#	120.00
M1806W	4-20W	24" x 16" x 5"	5"	Wired	19#	39.15

\*For approximate 80% Average Power Factor, deduct \$2.80 list.

†M2160W includes special 4-stem hanger. M2160W-62W are not carried in stock but made on special order only.

**DESCRIPTION:** Fixture exterior and self-aligning hanger (when furnished) finished Satin Aluminum; ends are cast aluminum, finished Satin and Polished Aluminum. Reflectors are permanently finished by the ALZAK process. Fixtures are WIRED complete with 110-125 volt, 60 cycle, A. C. High Power-Factor ballasts, starting compensators (for 48" units), and separate starter switches, ready to install. For additional stem length, add 80 cents list per foot or fraction thereof, when fixtures are desired for longer than 36" overall. TRU-CO-LITES (WIRED) are listed by Underwriters' Laboratories, Inc.



## CHARACTERISTIC CURVE

Illustrating wide light distribution of TRU-CO-LITE in three planes. Overall Luminaire efficiency is approximately 80%. The upright shown on Lighting Curve completely washes-out ceiling shadows when TRU-CO-LITES are suspended or when close-ceiling mounted.



# GUTH ALZAK

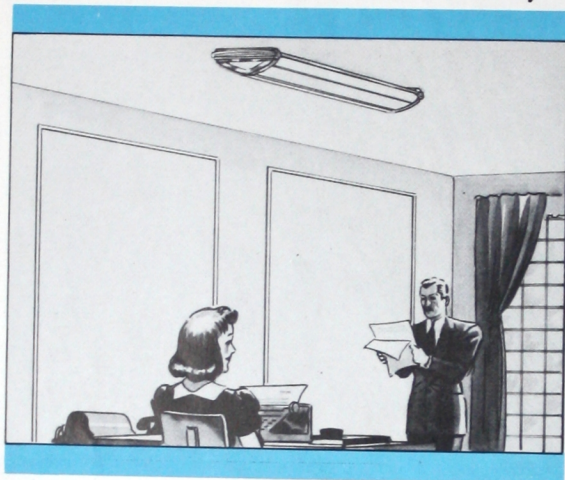


## EXCELUX FLUORESCENT

TRADE MARK REGISTERED — U. S. PATENTS PENDING

THE FINEST REFLECTOR FOR  
MODERN LIGHTING . . .

*Suspended or Close-Ceiling Mounted -- Conveniently Re-lamped*



### QUALITY FLUORESCENT LIGHTING

THE EXCELUX Fluorescent Luminaire was planned to provide the finest diffused lighting for the office or store. The Glass and Plastic used for the EXCELUX cover were carefully selected for high diffusion and transmission properties. Reflectors are finished highly efficient LUX-LITE white. The result is an efficient fully-screened illuminant to provide better seeing and working conditions.

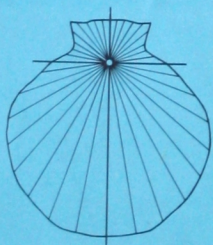
Utterly new in design, the EXCELUX is a beautiful luminaire that adds to the appearance of any interior. The gracefully formed shield (Glass or Plastic) is supported between the cast ends by trim satin-finished rods. Luminous Glass-Windows set-off the satin-finish and bright-beading of the cast aluminum ends. The new EXCELUX Fluorescent is adaptable to suspended or close-ceiling mounting. Single point, suspension type canopy with swivel stems provides automatic alignment. The hangers are finished Satin Aluminum.

### CONVENIENT CLEANING AND RE-LAMPING

The new Guth EXCELUX is easily serviced. By means of a special retaining hinge, the framed cover can be lowered for cleaning or re-lamping. The LUX-LITE white reflectors are easily removed for access to the ballasts.

#### LIGHT CURVE

The light curve of the EXCELUX Fluorescent (at left) illustrates thorough distribution of light from this luminaire. Moreover the glass-end windows deliver additional light to minimize spotty illumination.



#### ILLUMINATION DATA

EXCELUX Spacings	Ceiling Height	Mounting Height	Area Conditions	Approx. Av. Ft. Candles
6' x 8'	10'	8'	Light Fair Dark	55 49 37
7½' x 8½'	11'	8'6"	Light Fair Dark	41 36 25
9' x 9' or 10' x 10'	12'	9'6"	Light Fair Dark	27 24 19
10' x 10' or 9' x 11'	13'	10'	Light Fair Dark	26 22 18
11' x 11' or 10' x 12'	14'	10'6"	Light Fair Dark	23 19 15

The readings in the above table were made with 40-watt white Mazda F lamps and Glass Covers. When Plastic Covers are used multiply above readings by .87½. If results for daylight Fluorescent lamps are desired, multiply the above figures by .85.





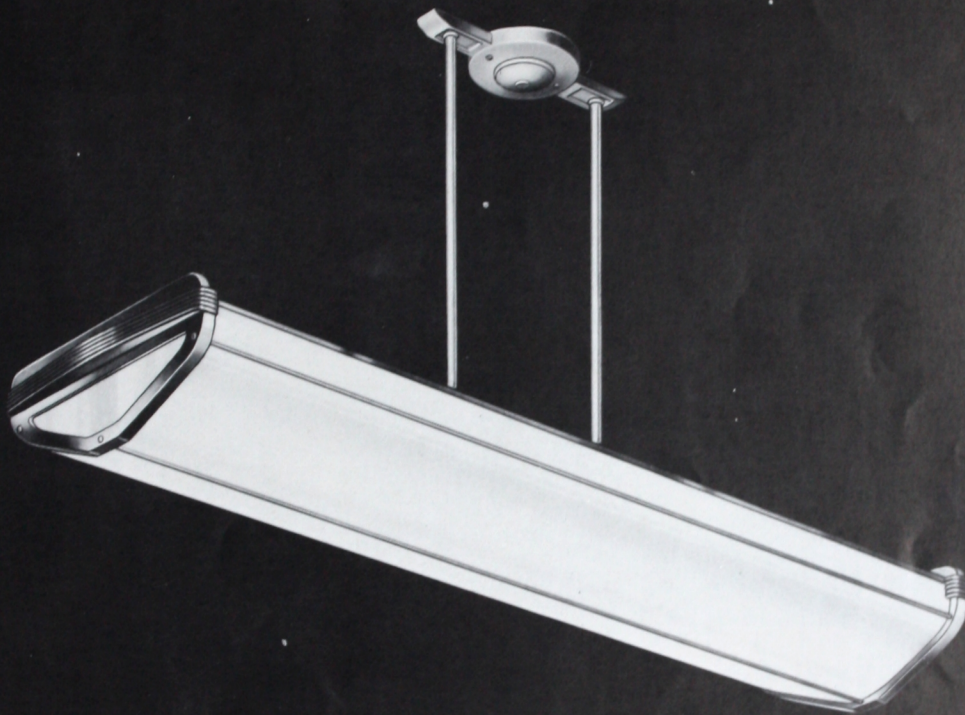
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GUTH  
ALZAK



# EXCELUX FLUORESCENT

TRADE MARK REGISTERED — U. S. PATENTS PENDING



*Is Efficient, Attractive and Practical*

*The Least Expensive Quality Fluorescent Light Diffusing Unit in America*

**EXCELUX Fluorescent**, new luminaire development for Office and Store lighting, brings trim modern design with high quality semi-indirect illumination. Full-screen lamp diffusion is effected with either Glass or Plastic Shield — at same low cost. Full-screen lamp diffusion minimizes all glare for eye comfort, and effects more uniform intensities.

An ingenious hinged-arrangement makes maintenance and cleaning easy and practical. The completely framed (glass or plastic) cover, released at one end, lowers in a retaining hinge for easy access to lamps, starters and covers. It is also removable for access to the ballast.

**DESCRIPTION:** Fixtures are wired complete with High-Power-Factor (95-100%) ballasts, compensators and starter switches, ready to install (lamps not included). Prices include packing and freight allowance on 100# single-lot shipments to U. S. Continent destinations. Specify catalog numbers, designating glass or plastic covers. Removable Reflectors are LUX-LITE White Enamel. Ends are cast aluminum polished and Satin finished with Glass-Windows for end-light. When longer stem lengths are desired, add 80 cents list per foot or fraction thereof.

## SUSPENDED TYPE—(WITH HANGER)

Cat. No.	Lamp Wattage	Type Shield	Body Size	Overall Lgth.	How Ship	Shp. Wt.	List Price
M2100W	4-40W	Glass	15 x 6½ x 50½	30"	Wired	52#	\$61.40
M2104W	4-40W	Plastic	15 x 6½ x 50½	30"	Wired	40#	61.40

## CLOSE CEILING TYPE—(WITHOUT HANGER)

M2120W	4-40W	Glass	15 x 6½ x 50½	6½"	Wired	49#	\$56.90
M2124W	4-40W	Plastic	15 x 6½ x 50½	6½"	Wired	37#	56.90

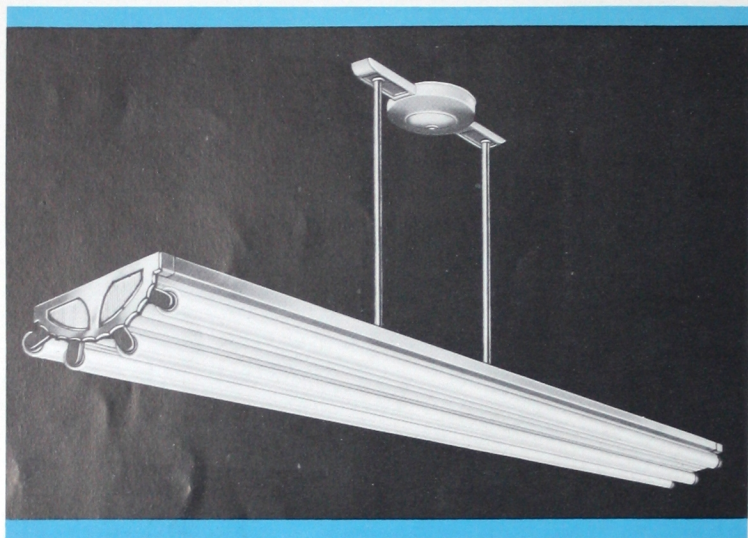


# GUTH ALZAK

THE FINEST REFLECTOR FOR  
MODERN LIGHTING . . .

## Guth GUTH-GLOW . . . FLUTING GLOWS OF LIGHT

*Elongated Fluting Appears As Series of Glass Bars — Polished Cast End-Plates*  
*Genuine ALZAK Aluminum*



GUTH-GLOW, of attractive convex-fluted design, is in harmony with the elongated design of the Fluorescent lamp. When illuminated, the richly finished ALZAK Aluminum fluting appears as a series of glass bars. Polished aluminum cast ends set-off the fineness expressed in this elegant design. GUTH-GLOW may be suspended on hangers or mounted directly to the ceiling. Lamps are positioned so that ceiling illumination is afforded with the 3 and 4 lite types. "P-F-C" Plastic Diffusers (see pages 14 and 15) may be "snapped-on" the lamps to provide quality diffused lighting and enhance beauty in design.

**DESCRIPTION:** Fixture body size is 9 3/4" x 5" x 48". Reflector is aluminum finished permanent SATIN ALZAK. Ends are cast aluminum finished Satin and Polished. Self-aligning Hangers when furnished are finished Satin Aluminum. WIRED units are equipped with 110-125 volt, 60 cycle A. C. ballast (High Power Factor), compensators and separate starter switches. Canopy pull-switch available at \$1.50 list. For extra hanger length than 36" add 80 cents list per foot or fraction. WIRED Units are listed by Underwriters' Laboratories, Inc.

### SUSPENSION TYPE—(WITH HANGERS)

Cat. No.	Lamp Watt.	Lgth.	How Ship.	Shg. Wt.	List Price
M1752W	2-40W	30"	Wired	22#	\$35.55
M1754W*	3-40W	30"	Wired	26#	45.10
M1756W	4-40W	30"	Wired	30#	50.00

### CLOSE CEILING TYPE—(LESS HANGERS)

M1746W	2-40W	5"	Wired	20#	\$31.05
M1748W*	3-40W	5"	Wired	24#	40.55
M1750W	4-40W	5"	Wired	28#	45.50

\*For approximate 80% Average Power Factor, deduct \$2.80 list.  
LISTED BY UNDERWRITERS' LABORATORIES, INC.

## Guth DUOFLUO . . . FOR SKY-LIGHTING EFFECTS

UNITED STATES PATENT No. 120,548

*Intensive, Extensive or Asymmetric Distribution—"Turn-Around" ALZAK Reflectors*

DUOFLUO, the novel Skylight Luminaire for store and office close-ceiling mounting, offers a range of lighting effects made possible with ingenious "Turn-Around" ALZAK reflectors. DUOFLUO blend nicely for clean architectural ceilings; and with reflectors in Extensive Position, can be spaced from 1 1/4 to 1 1/2 times their mounting height with uniform illumination results. Made in sizes for 4-, 6-, and 8-40 watt lamps. DUOFLUO will provide Intensive downlight or Extensive wide light distribution; also, Asymmetric distribution with one side strong downlight and one side wide distribution. Available with Glasrip or "P-F-C" Plastic Diffusers.

**DESCRIPTION:** DUOFLUO exterior is finished Modern Gray Enamel; with removable and "Turn-Around" ALZAK aluminum reflectors. WIRED prices include 110-125 volt, 60 cycle A. C. High Power Factor ballasts, starting compensators and starter switches. Lamps are not included in prices listed. Pull switches available at \$1.50 list each. "P-F-C" Plastic Diffusers (see pages 14 and 15) can be used to diffuse the lamps or "Glasrips" are very effective. Add \$4.80 list for either the "P-F-C" or "Glasrip" for each two lamps (for instance, M1601W for four lamps lists at \$50.25. Add \$9.60 list for either "P-F-C's" or "Glasrips.")

Cat. No.	Lamp Watt.	Body Size	How Ship.	Shg. Wt.	List Price
M1601W	4-40W	19 1/2 x 6 x 48 1/4"	Wired	27#	\$50.25
M1602W	6-40W	28 x 7 1/2 x 48 1/4"	Wired	72#	74.10
M1603W	8-40W	37 x 9 x 48 1/4"	Wired	85#	97.95

LISTED BY UNDERWRITERS' LABORATORIES, INC.



### THREE LIGHTING RESULTS FROM ONLY ONE FIXTURE

The ingenious "Turn-Around" ALZAK Reflectors which take less than ten minutes to turn-around, effect EXTENSIVE, INTENSIVE, or ASYMMETRIC lighting.



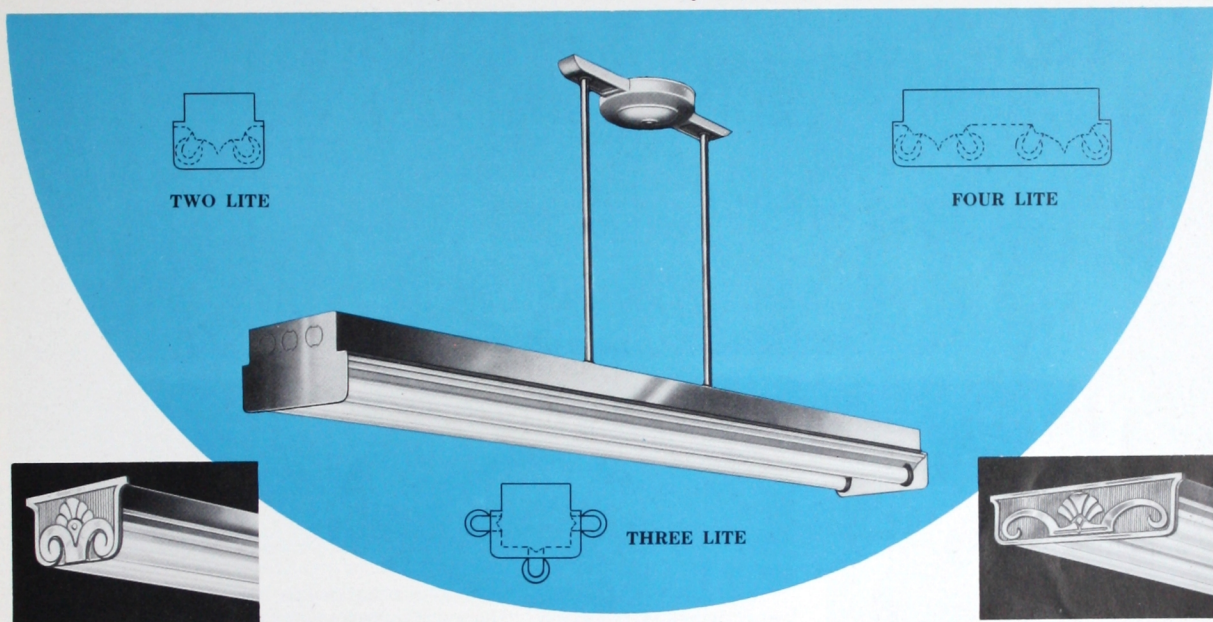


ALZAK IS MORE EFFICIENT  
... ALZAK IS PERMANENT

**GUTH  
ALZAK**

# Guth **FLU-O-FLECTORS** ... FOR ALL-PURPOSE LIGHTING

*Up to 25% More Light-Output — High Quality at Low Cost — Rigidly Built  
Genuine ALZAK Reflectors*



**ORN-1**—Cast Ends of handsome design are of virgin aluminum, finished Satin with Polished highlights. Seats on 2- and 3-lite units; two required for each fixture. List each \$1.25.

## TWO, THREE AND FOUR LITE SIZES

LISTED BY UNDERWRITERS' LABORATORIES, INC.

**ORN-2**—Cast aluminum end-piece for four-light units, is companion in design for ORN-1. Conveniently seats on fixture. Two required for each fixture. List each \$2.50.

**F**OR general lighting in stores and offices, FLU-O-FLECTORS deliver up to 25% more light, and represent highest quality at lowest-cost. They can be mounted in many ways (see illustrations at right). FLU-O-FLECTORS are equipped with aluminum reflectors processed ALZAK, which brightens and seals the aluminum to assure virtual permanency. The ALZAK reflectors are designed for maximum light output with "V" design to insure a minimum of "pocketed" light. The functional appearance of FLU-O-FLECTORS is enhanced by their neutral Modern Gray and Aluminum finish. The reflectors are removable for easy washing and for easy access to the accessories and lampholders which are attached directly to the channel. Lampholders are protected and assured of upright position by welded-on end-caps. When FLU-O-FLECTORS are desired for end-to-end mounting, they can be "locked-together" (end-caps have K. O.'s). When lamp diffusion is desired, "P-F-C's" plastic diffusers (see pages 14 and 15) can be simply and conveniently "snapped-on" the lamps.

### SUSPENSION MOUNTING—(WITH HANGER)

Cat. No.	Lamp Wattage	Body Size	Lgth.	How Ship.	Std. Crt.	Shp. Wt.	List Price
<b>M1816W</b>	2-40W	4½ x 5 x 48"	30"	Wired	2	34#	\$23.75
<b>M1856W*</b>	3-40W	4½ x 5 x 48"	30"	Wired	1	25#	34.00
<b>M1818W</b>	4-40W	12 x 5 x 48"	30"	Wired	1	35#	43.00

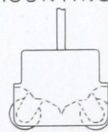
### CLOSE-CEILING OR SEMI-RECESSED MOUNTING—(LESS HANGER)

Cat. No.	Lamp Wattage	Body Size	Lgth.	How Ship.	Std. Crt.	Shp. Wt.	List Price
<b>M1640W</b>	2-40W	4½ x 5 x 48"	5"	Wired	2	32#	\$19.25
<b>M1850W*</b>	3-40W	4½ x 5 x 48"	5"	Wired	1	23#	29.50
<b>M1808W</b>	4-40W	12 x 5 x 48"	5"	Wired	1	33#	38.50

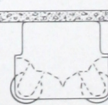
\*For approximate 80% Average Power Factor deduct \$2.80 list.

**DESCRIPTIONS**—FLU-O-FLECTORS consist of 20 U. S.-gauge steel channels finished Modern Gray Enamel, and removable ALZAK aluminum reflectors of engineered design for maximum output and virtual permanency. Self-aligning hangers when furnished are finished Satin Aluminum. WIRED units are furnished complete ready to install with High Power Factor (90% or better) ballasts for 110 volts, 60 cycle A. C., compensators (where required) and separate starter switches. Canopy pull-switches available at \$1.50 list each. Lamps are not included in prices. For extra hanger length than 36" overall, add 80-cents list per foot or fraction. WIRED FLU-O-FLECTORS for suspension or close-ceiling mounting, are listed by Underwriters' Laboratories, Inc. All accessories furnished are also approved by Underwriters' Laboratories, Inc.

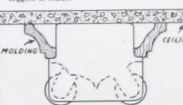
### SUGGESTED MOUNTINGS



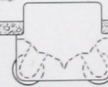
1. STEM MOUNTING  
Suspension mounting on hanger as shown above.



2. CLOSE CEILING  
Attached directly to ceiling by wood screws, toggles or studs.



3. BUILT-ON MOLDING  
Same as close-ceiling mounting with standard wood molding built-on sides, painted same as ceiling.



4. SEMI-RECESSED  
Channel portions of FLU-O-FLECTORS can be recessed into ceiling with only the efficient ALZAK reflector exposed.

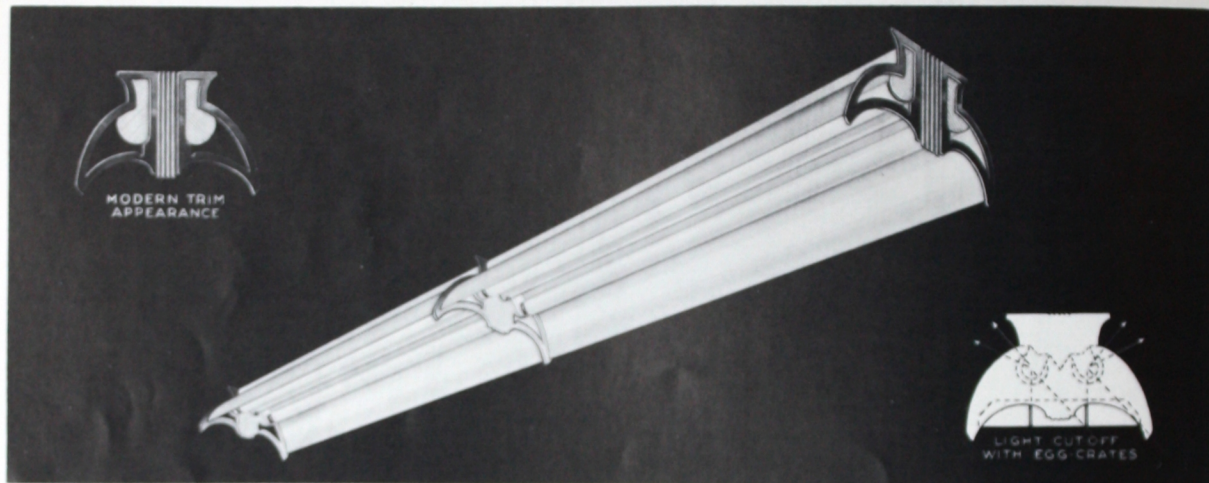


# GUTH ALZAK

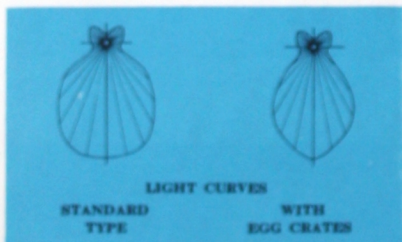
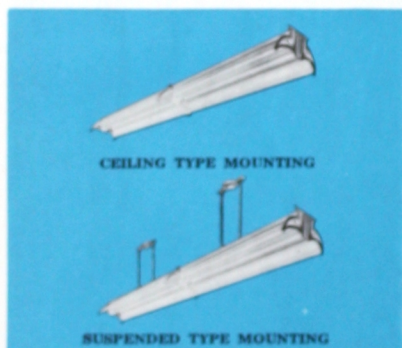
THE FINEST REFLECTOR FOR  
MODERN LIGHTING . . .

## Guth SURFACE TROFFERS

*Unit or Continuous Mounting — Egg-Crates when Desired,  
Inner ALZAK Reflectors*



INSPECTED BY UNDERWRITERS' LABORATORIES, INC.



THE new Guth Surface Troffers for Offices and Stores can be installed as individual units or in continuous rows; made for 2-40 or 3-40 watt lamps per 48-inch section. Surface Troffers are for ceiling mounting and also can be suspended on Guth M1861 Hangers (see Page 12) for high ceilings, with direct ceiling illumination assured.

Where desired Guth M2072 Egg-Crate Louvres (see Page 18) provide effective lamp shielding. Egg-Crates are included in prices of M2084W, -86W, -94W, and -96W. The 2-40 watt units with Egg-Crate Louvres provide approximately 45° light-cutoff. Egg-Crates, reflector and side baffles are finished aluminum for highly desirable low-surface brightness.

Cat. No.	Lamp Wattage	Type Unit	Unit Dimensions	Egg Crate Louvres	List Price
M2080W	2-40W	Base	12½x8½x48½"	No	\$29.25
M2082W	2-40W	Cont.	12½x8½x48½"	No	25.25
M2084W	2-40W	Base	12½x8½x48½"	Yes	35.25
M2086W	2-40W	Cont.	12½x8½x48½"	Yes	31.25
M2090W*	3-40W	Base	12½x8½x48½"	No	\$39.50
M2092W*	3-40W	Cont.	12½x8½x48½"	No	35.50
M2094W*	3-40W	Base	12½x8½x48½"	Yes	45.50
M2096W*	3-40W	Cont.	12½x8½x48½"	Yes	41.50

\*Three-light units for approximate 80% Average Power Factor deduct \$2.80 list.

**ILLUMINATION DATA:** An area 32' x 60' with an 11' ceiling illuminated with 4-continuous rows of 2-40 watt (white lamps) Surface Troffers, 13-48" units (26 lamps) per row (rows on 8' centers) will have 52 Foot-Candles. The 3-40 watt Surface Troffers in this same area will provide 75 Foot-Candles. When Daylight lamps are used multiply above readings by .85. When Surface Troffers are used with Guth M2072 Egg-Crate Louvres, the distribution and illumination is slightly decreased (See curve above). In large areas as above, 2-6 watts (including ballasts and white lamps) per square foot will provide 50 Foot-Candles in service. In smaller areas, where room conditions are not so favorable, the illumination will be approximately 75% as much.

**DESCRIPTION:** Listings show two type units for 2-40 and 3-40 watt units also with and without Egg-Crate Louvres. The "Base" type unit is a fixture complete with two cast ends or can be coupled together with "Cont." (designating Continuous extensions) type units which are furnished with one cast joiner (no ends). Reflectors are genuine ALZAK Aluminum. Ends and Joiners are of cast aluminum finished Satin with Polished Highlights. Egg-Crates are finished Baked Aluminum as are the Side Baffles. Accessory Channels are finished neutral Harmony-Gray. Fixtures are wired complete with 110-125 volt, 60 cycle, A. C. High Power Factor (90% or better) ballasts, starting compensators and separate starter switches. Fixtures are packed for easy assembly and installation. When M1861 Hangers are desired, add \$4.50 list each. Surface Troffers are inspected by Underwriters' Laboratories, Inc.



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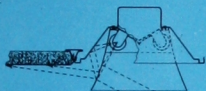


# RECESSED TROFFERS

TRADE MARK REGISTERED. U. S. PATENT No. 124,998—OTHERS PENDING.

*Recessed Fixtures for Unit or Continuous Arrangements ... Four Types  
Removable ALZAK Reflectors*

*New, Different*  
**TROFFER LIGHTING**

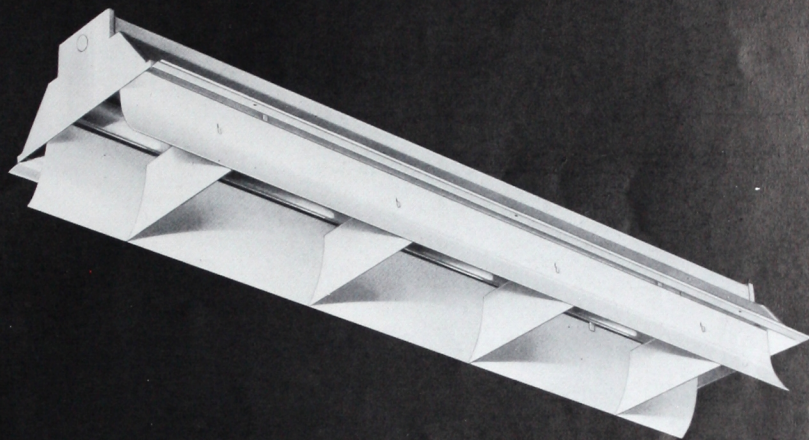


**LIGHT-O-DAY  
BAFFLES**

(Patents Pending)

**Provide  
CEILING ILLUMINATION**

"LIGHT-O-DAY" bell-shaped Baffles reduce severe "light-and-dark" contrast between fixture and adjoining ceiling by deflecting some of the light towards the ceiling, as shown in diagram above. Result—a more cheerfully lighted area, yet with accepted brightnesses on baffles.



## Recessed Troffers With **LIGHT-O-DAY** Baffles

Recessed Troffers with New "Light-O-Day" Baffles eliminate major problem of any recessed installation—provide pleasant ceiling illumination between fixtures. Other Guth Troffer types are available: with Open Bottom, with flush hinged-frame for Glass Panel Bottom and for "P-F-C" Plastic Diffusers (p.p. 14-15). Genuine ALZAK Aluminum Reflector boosters give Recessed Troffers "bonus lighting" output. These reflectors are removable from below to easily reach accessories.

Guth Troffers can be used in shallow as well as deep ceilings, for fixture's overall depth is only 5½". Recessed Troffers may be installed as individual units or in continuous lengths. Either Ceiling-Flange or Teebar mountings are available. "Light-O-Day" Baffles are easily removed for cleaning or re-lamping. Special Underwriters' Recessed Labels are furnished on Ceiling Flange Type Recessed Troffers.

Cat. No.	Lamp Wattage	Type	For	Ceiling Hole Size	Shg. Wt.	List Price
M1824W	2-40W	Open*	Ceiling Flange Type Mounting**	48½"x11x5¼"	26#	\$26.35
M1832W	2-40W	For Glass†		48½"x11x5¼"	29#	30.35
M1840W	2-40W	With Baffle		48½"x11x5¼"	33#	30.10
M1822W	2-40W	Open*	Teebar Type Mounting	48½"x12x5½"	27#	\$26.35
M1830W	2-40W	For Glass†		48½"x12x5½"	30#	30.35
M1838W	2-40W	With Baffle		48½"x12x5½"	34#	30.10

\*Open type may be diffused with "P-F-C" Plastic Diffusers (p.p. 14-15).

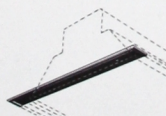
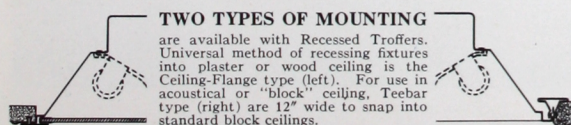
†Prices do not include Glass. Troffers require 47½" x 10½" panels. Crystal Roughed, Flashed or Patterned Glass can be purchased locally to save freight, breakage, and packing. If desired, we will supply FLUTEX glass, 1 to 100 panels, at \$12.00 each list; 100 or more panels, \$9.70 each list; or Crystal Roughed Glass, 1 to 5 panels, at \$3.90 each list; 6 or more panels, \$3.00 each list.

\*\*Plaster Frames, size 48½" x 11½", of ¾" x 1" angle iron, will be supplied at \$4.00 list additional for ceiling flange types. Finished outer frame size for Ceiling Flange Types is 48½" x 13". See "End Flaps."

**DESCRIPTION:** Troffers and Baffles Heavy Gauge Steel; Galvanic Rust protected; finished Egg-Shell White Baked Enamel. Removable ALZAK Aluminum Reflectors give easy access to ballasts without disturbing installed fixture. Prices include fixtures WIRED complete with High Power Factor Ballasts, 110-125 Volt 60 Cycle, A C. ready to install. Lamps not included.

### TWO TYPES OF MOUNTING

are available with Recessed Troffers. Universal method of recessing fixtures into plaster or wood ceiling is the Ceiling-Flange type (left). For use in acoustical or "block" ceiling, Teebar type (right) are 12" wide to snap into standard block ceilings.



### END FLAPS

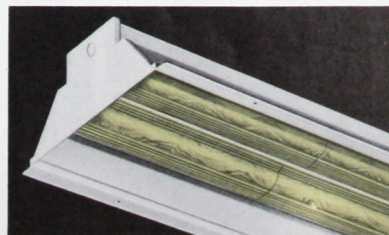
Provide finished flanged appearance at the ends on Ceiling Flange types installed by drilling ends and attached with screws. End flap, M1847, lists at \$0.50 each.



OPEN TYPE TROFFERS



GLASS BOTTOM TROFFERS  
(Glass Not Furnished)



OPEN TYPE WITH PLASTIC DIFFUSERS  
See P. 14-15 for "P-F-C's"



# GUTH ALZAK

THE FINEST REFLECTOR FOR  
MODERN LIGHTING . . .

Guth

## FLU-O-FLECTORS . . . HIGHEST QUALITY AT LOWEST COST

Genuine ALZAK Reflectors

### HANGERS

Single-Point suspension hangers and stems are made of heavy gauge steel finished Satin Aluminum. Swivel arrangement provides fixture alignment. M1861 is made to carry equipment up to and including four 40-watt lamp fixtures. M1863 is for 2-40 watt or 4-20 watt size fixtures. M1863 has deep canopy for offset boxes.

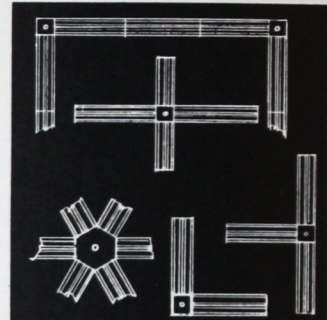
For longer stem length than 25", add 80c list per foot or fraction thereof.

Cat. No.	Canopy Length	Stem Centers	O. A. Length	List Each
M1861	13 1/4"	10"	25"	\$4.50
M1863	12"	10"	25"	3.50
M350	6"	—	36"	3.00

### CENTER AND CORNER UNITS

FLU-O-FLECTOR STRIPS can be artistically arranged on the ceiling when used with standard center and corner units. In diagram to right are several suggested arrangements. Units are made of steel, finished to match FLU-O-FLECTOR STRIP, with aluminum bottom ornament. Made in various sizes for standard FLU-O-FLECTORS.

Cat. No.	Shape	Use With	O. A. Size	List Each
M1865	Square	2 Lite	5 1/4"	\$ 2.50
M1866	Square	3 and 4 Lite	13"	5.00
M1867	Hexagonal	2 Lite	10 3/4"	3.50
M1868	Hexagonal	3 and 4 Lite	26"	7.00



### CAST ALUMINUM ENDS

Attractive ends can be attached directly to FLU-O-FLECTORS to add to the overall appearance. Ends are of cast aluminum, finished Satin, with Polished highlights.

Cat. No.	For Std. Units	O. A. Size	List Each
ORN-1	2 and 3 Lite	5 1/8" x 3"	\$1.25
ORN-2	4 Lite	12 1/2" x 3"	2.50

### BRACKETS

FLU-O-FLECTORS can be mounted over display tables, over wall-cases and many other locations. Catalog No. M1870-71-72 are designed to accommodate standard units—two required for each fixture. Mounting nipples are on 10" centers. If desired K. O.'s on 25" centers can be used. Standard finish is Satin Aluminum.

Cat. No.	Height or Length	List Each
M1870	20"	\$5.00
M1871	20"	4.50
M1872	20"	4.50

### FOR FITTER ATTACHMENT

Fitters for attaching 18" and 24" lamp units to stem hangers. Finished to match FLU-O-FLECTOR. Not recommended for use on chain hangers.

Cat. No.	For Fitter	List Each
M1873	4"	\$1.50
M1874	6"	1.75

**OTHER PARTS:** When 4' reinforced cord and plug is desired wired onto fixtures add \$2.00 list.

MP3000—Loop with 3/8" male thread finished aluminum—List Each—20 cents.  
MP802—Aluminum finished Jack-chain, lists at 10 cents per foot.  
MP3003—Reducer 1/2" female to 3/8" male—Lists at 20 cents each.

FLU-O-FLECTORS, ceiling mounted, in Aboud's Super-Market, Louisville, Kentucky. M1640's are used in interior to deliver 35 foot-candles, and M1632W's are used in the show windows.

Sherwin-Williams Paint Store at Erie, Pennsylvania, illuminated with M1816W on 10" x 8" centers at 12" mounting height to effect 20-25 foot-candles (white lamps used).

M1640W installed in basement of Feldman's, Inc., Lima, Ohio. 22 units are installed on 7" x 9" centers for 50 foot-candles initially. Wood molding is built on side of the standard units.





**ALZAK IS MORE EFFICIENT  
... ALZAK IS PERMANENT**

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# Guth FLU-O-FLECTORS

*For Hundreds of Applications — Built-to-Last  
Removable ALZAK Reflectors*

**G**UTH FLUOFLECTOR STRIPS provide a complete lighting system, smart-in-appearance, and low-in-cost. Reflectors are diffused ALZAK aluminum mounted on 20 U. S. gauge, Galvanic rust-protected steel channels, finished chipless Grey Enamel. Application includes general illuminating purposes, localized lighting, and hundreds of other applications. The M1632W to M1638W series are excellent for the lighting of stock bins, etc. Fluoflector Strips are complete fixture units which mean quicker assembly and installation. Each unit is built intact, with welded-on ends which serve to protect the Fluorescent sockets and insure their upright position. Ends have knockouts for continuous runs.

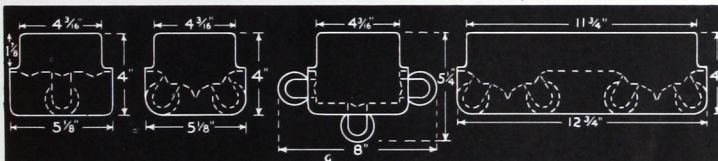
Cat. No.	Lamp Wattage	Std. Crtn.	Crtn. Shg. Wt.	List Price Each Unit
M1632W	1-40W	2	23#	\$14.40
M1634W	1-30W	2	18#	13.30
M1636W	1-20W	2	12#	10.50
M1638W	1-15W	2	10#	10.10
M1640W	2-40W	2	32#	19.25
M1642W	2-30W	2	28#	18.05
M1644W	2-20W	2	16#	14.65
M1646W	2-15W	1	14#	14.15
M2040W*	2-100W	2	60#	39.00
M2042W*	2-65W	—	—	—
M1850W**	3-40W	1	23#	29.50
M1854W**	3-20W	1	12#	22.25
M1808W	4-40W	1	33#	38.50
M1810W	4-30W	1	28#	36.10
M1812W	4-20W	1	17#	29.30
M1814W	4-15W	1	16#	28.30

**NOTE:** A charge of 50 cents list will be made for less than Standard Package.

\*Two 100-watt units are available in limited quantities until ballast production is increased. The two 65-watt ballasts will be available in the near future. Prices on request.

\*\*For approximate 80% Average Power Factor deduct \$2.80 list.

LISTED BY UNDERWRITERS' LABORATORIES, INC.



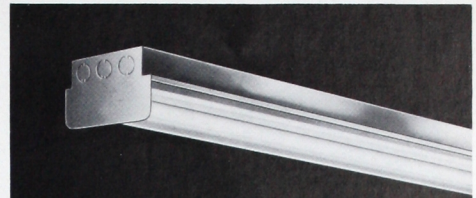
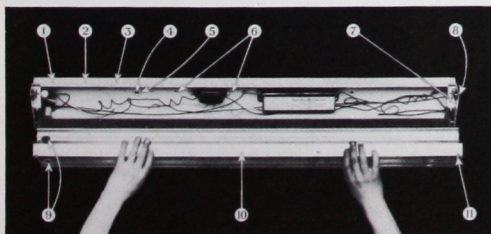
**ONE LITE    TWO LITE    THREE LITE    FOUR LITE**

Prices include freight allowance of 100# single lot shipments to United States Continent destination. Dimensions are given in diagram above. Fixture lengths are  $\frac{1}{4}$ " longer than lamp lengths. The M2040W is 60 $\frac{1}{8}$ "x7"x5". Prices above include wiring complete with 110-125 volt, 60 cycle, A. C. ballast for 90% or better High Power Factor, starting compensators (where required), and separate starter switches, ready to install. Prices are less lamps. FLU-O-FLECTORS above are listed by Underwriters' Laboratories, Inc. Mounting nipples are on 10" centers. On 36", 48" and 60" units, besides these mounting nipples there are K.O.'s on 25" centers.

## QUALITY-PLUS "STRIPS"—13 FEATURES

### ADVANTAGES OF GUTH FLU-O-FLECTOR STRIPS

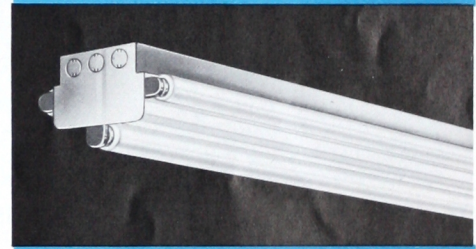
1. Heavy 20 U. S. gauge steel channel.
2. Steel channel is rust-protected by Galvanic process.
3. Channel exterior is finished chipless Grey Enamel.
4. Mounting nipples for  $\frac{3}{8}$ " stems or loops are on 10" centers (except on 15 and 20 watt units). Besides mounting nipples on 10" centers, the 36", 48" and 60" units have K.O.'s on 25" centers.
5. Mounting holes have swaged on inside of Channel,  $\frac{3}{8}$ " nipples for easy stem or loop attachment.
6. Holes punched to take G. E. accessory equipment.
7. Welded-on ends protect and insure upright position of sockets.
8. Knockouts on ends for "Locking" Strips together, or installation of pull switches.
9. Holes in reflectors for easy access to starter switches.
10. Heavy gauge aluminum reflector correctly engineered and finished diffused ALZAK for maximum lighting effectiveness, efficiency and permanence
11. Reflector removable by unscrewing two nuts, insures easy washing.
12. Up to 25% more Light-Output.
13. Overall cost of WIRED FLU-O-FLECTORS installed, is lower than ordinary strip.



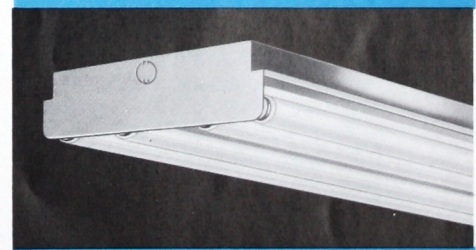
**ONE LITE STRIP M1632W-38W**



**TWO LITE STRIP M1640W-46W-2040W-42W**



**THREE LITE STRIP M1850W-54W**



**FOUR LITE STRIP M1808W-14W**



# GUTH ALZAK

THE FINEST REFLECTOR FOR MODERN LIGHTING . . .

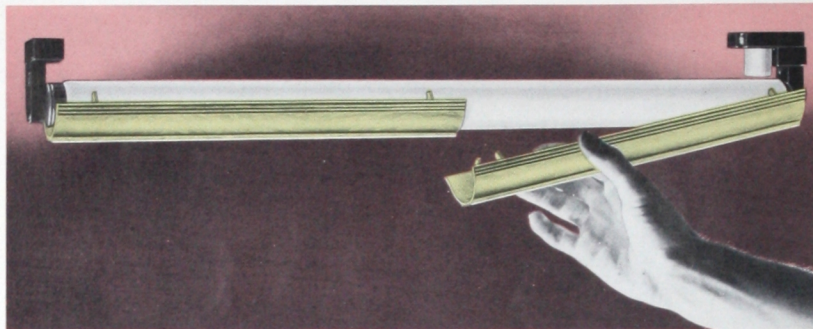


## "P-F-C's" PLASTIC DIFFUSERS . . . IN 5 COLORS

TRADE MARK AND PATENTS PENDING

*Reduce Lamp Brightness — Efficient — Decorative — No Hazard*

**SNAP-ON T-8 AND T-12 LAMPS**



**PROVIDE "FULL-SCREEN" LAMP DIFFUSION**



**FOR OFFICES**

"P-F-C's" provide brightnesses of accepted lighting standards and eliminate harsh glare (by "full-screening" of the lamp) from business machine keys, and from employees' glasses.

**"P-F-C's"** ARE "SNAPPED-ON AND-OFF" Fluorescent lamps as shown above. Each weighs less than one ounce — there is no hazard involved. "P-F-C's" are shatter-proof, therefore, breakage is not a problem. The White "P-F-C," most commonly used for general lighting, reduces lamp brightness by over 30%, yet is more efficient in light transmission (84% when used with luminaire), than are diffusing glass panels.

### BRIGHTNESS IN TRANSMISSION READINGS

	Candle-Power Brightness	Transmission Factor
Bare 20-Watt White lamp . . . . .	3.6 C. P.	....
Same lamp with White "P-F-C" . . . . .	2.39 C. P.	82%
Same lamp with Yellow "P-F-C" . . . . .	2.15 C. P.	75%
Same lamp with Pink "P-F-C" . . . . .	1.93 C. P.	68%
Same lamp with Blue "P-F-C" . . . . .	1.89 C. P.	66%
Same lamp with Green "P-F-C" . . . . .	1.89 C. P.	66%
Same lamp with CRI Glass (for comparison) . . . . .	2.4 C. P.	78%

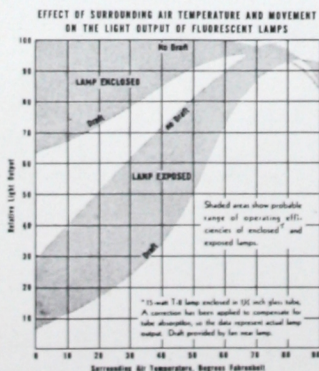
**NOTE:** Above figures do not take into consideration useful reflected light out of the channel and therefore are not efficiency readings. When used with Luminaires, the white "P-F-C" is 83% to 85% efficient.



**FOR STORES**

"P-F-C's" improve luminaire and lamp appearance as well as insure eye-comfort. Effective in colors for decorative or seasonal displays.

### "P-F-C's" INCREASE OPERATING EFFICIENCY



With "P-F-C's" "snapped-on," greater overall efficiencies can be expected from the Fluorescent lamps. In graph to left, are efficiency figures of the Fluorescent lamp, both enclosed and exposed, when operated under various temperatures and subject to draft conditions.

"P-F-C's" tend to reduce draft effects about the lamp and further tend to confine heat generated by the lamps themselves to effect better operating efficiency. Lamps operate at highest efficiency at normal room temperatures of 70 to 80° F. per graph, and with a minimum of drafts.



**COLOR FADING**

Meats or similar objects have a tendency to fade under fluorescent light. The Pink "P-F-C" Plastic Diffusers on fluorescent lamps minimize this fading and maintain the original colors. Yellow "P-F-C's" with White Lamps and Pink "P-F-C's" with Daylight Lamps add materially to the effectiveness and color values of Fluorescent light.

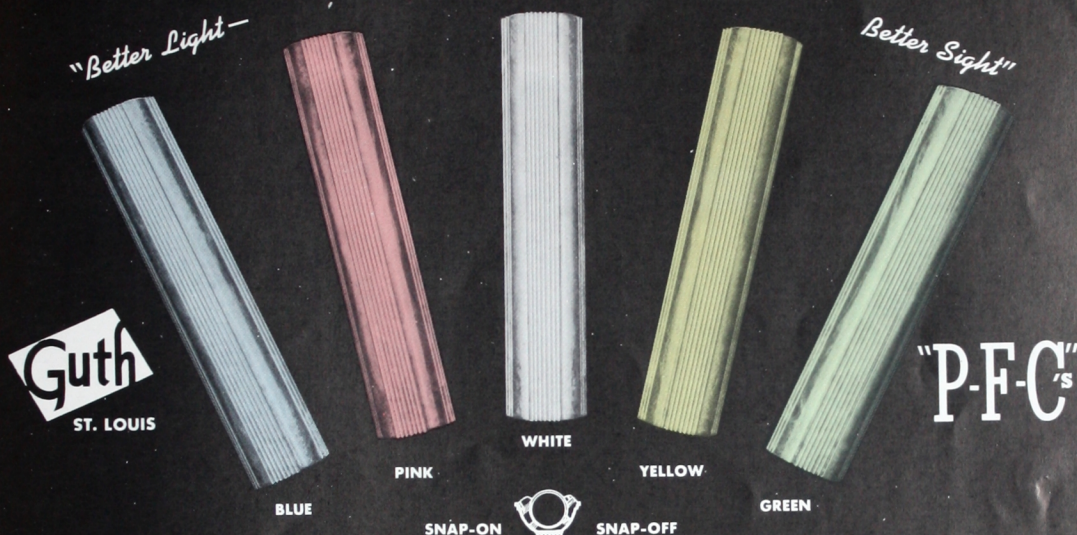


ALZAK IS MORE EFFICIENT  
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## PLASTIC FLUORESCENT CHANNELS

UNITED STATES PATENTS PENDING



**DIFFUSED LIGHTING • NO HAZARD • EFFICIENT • SHATTERPROOF • DECORATIVE**

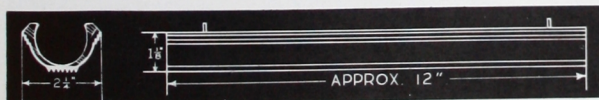
For T-8 and T-12 Fluorescent Lamps

**"P-F-C's"** ARE LIGHTWEIGHT Plastic Shields which simply and conveniently "snap-on" and "snap-off" both T-8 and T-12 Fluorescent lamps to provide diffused lighting of accepted brightness standards for stores, offices and hundreds of other applications. Richly grained, they are available in five colors, white, yellow, pink, pale blue, and light green, and are decorative as well as functional.

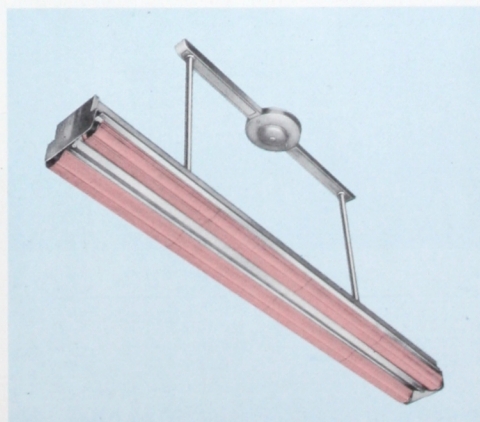
The white "P-F-C's," most commonly used for general lighting in offices and stores, reduce lamp brightness by over

30%, yet are more efficient in light transmission than are diffusing glass panels, yet there is no hazard involved as in the case of glass panels. No danger when replacing burned-out lamps. Maintenance cost of luminaires using "P-F-C" are of a minimum. Simply "snap-off" the "P-F-C's" or still simpler, take down the lamp and "P-F-C's" together. Low in cost, "P-F-C's" are economical to install. They are shatter-proof, thereby minimizing breakage cost (See preceding page on tests and other information on "P-F-C's.")

Cat. No.	Plastic Color	For Lamp Size	O. A. Lgth.	List Price	
				Lots of 4	Lots of 100
PFC-10	White	T-12	11 5/8"	\$0.60	\$0.50
PFC-11	White	T-8	11 5/8"		
PFC-20	Yellow	T-12	11 5/8"		
PFC-21	Yellow	T-8	11 5/8"		
PFC-30	Pink	T-12	11 5/8"		
PFC-31	Pink	T-8	11 5/8"		
PFC-40	Green	T-12	11 5/8"		
PFC-41	Green	T-8	11 5/8"		
PFC-50	Blue	T-12	11 5/8"		
PFC-51	Blue	T-8	11 5/8"		



**DESCRIPTION:** Each "P-F-C" is 11 5/8" long, 2 1/16" wide, and 1 1/8" deep. Four "P-F-C's" are required for each 48" Fluorescent lamp, three for each 36" lamp, and two for each 24" lamp. "P-F-C's" are not made for 18" lamps. "P-F-C's" are available in two sizes, that is, one size for 1 1/2" (T-12) Fluorescent lamp, and one size for 1" (T-8) Fluorescent lamp. Assorted colors may be ordered to make up quantities. If less than four "P-F-C's" are ordered at one time, the list price per unit is 85 cents. Standard shipping carton consists of four "P-F-C's."



"P-F-C's" are decorative as well as functional. Photo above shows underneath view of FLU-O-FLECTOR with "P-F-C's" snapped-on. The plastics in all colors have a rich pearl graining that enhances appearance by covering streaky and powdery effects in the lamps. "P-F-C's" also will hide "lamp-end-blackening" which happens to lamps in some cases.



# GUTH ALZAK

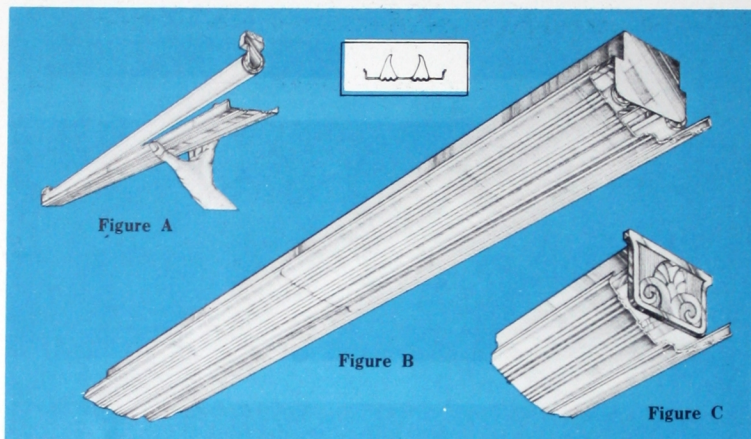
THE FINEST REFLECTOR FOR  
MODERN LIGHTING . . .



## "P-F-C" DIFFUSING STRIPS

TRADE MARK AND PATENTS PENDING

*Plastic Strips for One or Two Lamp Open Type Flu-O-Flectors*



● "P-F-C" Diffusing Strips in 12" or 24" Sizes

**DESCRIPTION:** Prices above are for "P-F-C" Plastics (only) and are to be added to fixture prices. "P-F-C's" can be used on one and two-light Flu-o-flector Strips, and for many other applications. Each "P-F-C" is 4" wide by 1/2" high (excluding integral clamps which snap-on the lamp). "P-F-C's" are not made for T-8, 1" lamps or for 18" lamps. If less than four assorted are ordered at one time, add 20% to prices above.

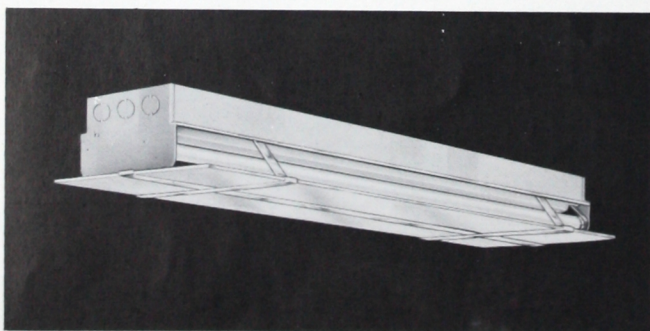
Figure A, to left, shows Guth's new "P-F-C" Plastic Diffuser Strip, made in two lengths 11 7/8" and 24", in three colors—WHITE, PINK and YELLOW—for the T-12, 1 1/2" Fluorescent lamp. Figure B shows "P-F-C" snapped-on Guth M1640 Flu-o-flector; and Figure C shows end-view with ORN-1 Cast-Ends. The WHITE "P-F-C" is used for general illumination; the YELLOW "P-F-C" on White lamps and the PINK "P-F-C" on Daylight lamps materially improves color value of Fluorescent lamps.

Cat. No.	Plastic Color	O. A. Lgth.	List Prices	
			Lots of 4	Lots of 100
P-F-C 110	White	11 7/8"	\$1.25	\$1.00
P-F-C 120	Yellow			
P-F-C 130	Pink			
P-F-C 111	White	24"	\$2.50	\$2.00
P-F-C 121	Yellow			
P-F-C 131	Pink			



## DIFFUSER STRIP FLU-O-FLECTOR

*Glass Bottom Panels Diffuse Light Source — Stock Sizes  
Reflectors ALZAK Aluminum*



DIFFUSER STRIP FLU-O-FLECTOR for stores and offices delivers refined illumination with its crystal roughed bottom glass panel. Made for 36" and 48" lamps, for two and four rows of lamps, DIFFUSER STRIP FLU-O-FLECTORS can be mounted on the ceiling; can be suspended from the ceiling (see M1861, page 12), or can be semi-recessed into the ceiling. Lamps are positioned at a slightly outward angle to allow a portion of the light for ceiling illumination. Priced with or without glass, but all prices include glass frames; in some cities it may be to advantage to purchase the glass locally.

Cat. No.	Lamp Wattages	Overall Dimensions	How Ship.	Shg. Wt. With Glass	List Price With Glass	List Price Less Glass
M1717W	2-30W	5 x 10 x 40"	Wired	32#	\$28.05	\$24.05
M1718W	2-40W	5 x 10 x 52"	Wired	36#	30.50	26.50
M1722W	4-30W	5 x 18 x 40"	Wired	64#	52.10	46.80
M1723W	4-40W	5 x 18 x 52"	Wired	72#	55.35	49.25

WIRED UNITS ARE LISTED BY UNDERWRITERS LABORATORIES, INC.

**DESCRIPTION:** Modern Gray Enamel heavy gauge channel with engineered aluminum reflectors, processed genuine ALZAK. All prices are complete with frames for glass but are priced with and without glass (in some cases it may be to a customer's advantage to purchase the glass locally). M1717W requires 2 panels each 10" by 20"; M1718W requires 2 panels each 10" by 26"; M1722W requires 2 panels each 18" by 20"; M1723W requires 2 panels each 18" by 26". When ordering fixtures LESS GLASS, specify NO GLASS. WIRED prices include high Power Factor ballast for 110-125 volt, 60 cycle A. C., starting compensators (when required) and starter switches. Prices do not include lamps. For self-aligning hangers when desired, see page 12.



Installation at Zepp Photo Supply Co., Baltimore, Md., using M1723W on M1862 hanger. Guth showcase, wall-case, and show window FLU-O-FLECTORS are also installed in this modern store.



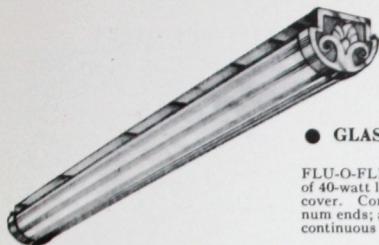
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# CUSTOM BUILT FLU-O-FLECTORS

*Built to Meet Specific Decorative & Illumination Requirements*



● **GLASS-STRIP-LITE**  
No. S42527

FLU-O-FLECTORS for 1 or 2 rows of 40-watt lamps with shielded glass cover. Complete with cast aluminum ends; also with cast joiners for continuous runs.

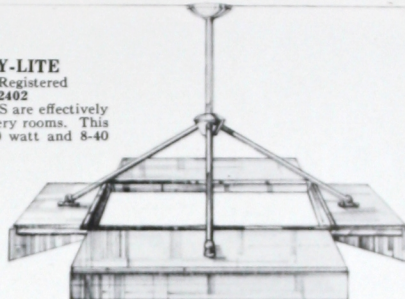


● **GOTHIC-CANDLE  
FLU-O-FLECTOR**  
No. S42634

Dramatic candle effect with Gold Fluorescent lamps. At bottom inside of fixture is large incandescent lamp for downward illumination. Other church type designs available.

● **SURGERY-LITE**  
Trade Mark Registered  
No. S42402

FLU-O-FLECTORS are effectively used in minor surgery rooms. This design utilizes 8-20 watt and 8-40 watt lamps.



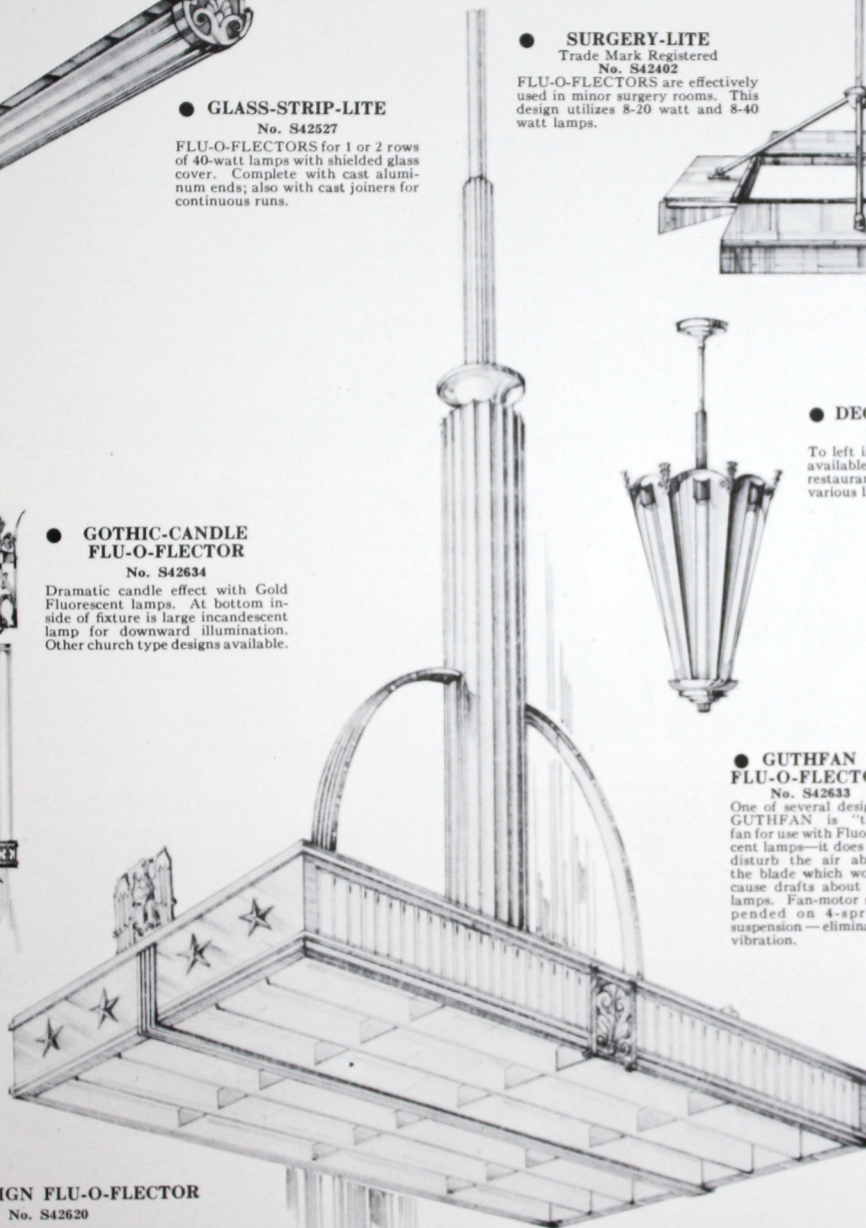
● **DECORATIVE TYPE**  
No. S42264

To left is illustrated one of several available designs for use in bars, restaurants, and club-rooms. For various lamp sizes.



● **GUTHFAN  
FLU-O-FLECTOR**  
No. S42633

One of several designs. GUTHFAN is "the" fan for use with Fluorescent lamps—it does not disturb the air above the blade which would cause drafts about the lamps. Fan-motor suspended on 4-spring suspension—eliminates vibration.



● **BANK-DESIGN FLU-O-FLECTOR**  
No. S42620

For the large high-ceiling banking rooms or large public areas. Designs available to carry out architectural details in the area. Send full description of area to be lighted.

● **FREE DESIGN SERVICE**

We offer to our distributors and dealers, special fixture design and layout. When inquiring for prices, advise exact quantity involved; also send complete description of area to be lighted.



# GUTH ALZAK

THE FINEST REFLECTOR FOR  
MODERN LIGHTING . . .

Guth

## UTILITY FLU-O-FLECTOR . . . FOR 2, 3 OR 4 LAMPS

*With Removable ALZAK Reflectors*



ALZAK reflector, independent of all other parts, is easily removed from the outer steel housing by unscrewing two large knurled nuts; enables better maintenance for industrial users. With extra reflectors on hand, maintenance crews simply take down the dirty reflectors and substitute reflectors which have been cleaned on the floor or at the bench. Safety factor, plus time saved, plus up to 25% better cleaning.

Ruggedly constructed the Utility Fluoflector is built to endure heavy industrial uses. Listed by the Underwriters' Laboratories, Inc.



### TWELVE IMPORTANT FEATURES

- 25% MORE LIGHT**—Up to 25% more light output by actual test is accounted for by use of efficient ALZAK reflectors, plus a minimum of "pocketed" light. ALZAK is the most efficient commercial reflecting surface. We invite comparative tests.
- GOOD DISTRIBUTION OF LIGHT**—Good light distribution, the result of engineered reflector design insures vertical as well as horizontal illumination. There is less apparent reflector brightness when looking into Utility Fluoflector than when looking into most competitive units.
- MORE EFFECTIVE LIGHT**—More effective lighting is produced by Utility Fluoflector. The Fluorescent lamp is a diffusing light source requiring a "punch" reflector to deliver maximum effectiveness. ALZAK provides this added "punch" necessary for really effective Fluorescent lighting.
- COOLER LIGHT**—A cooler light source, actually 75% less radiant heat (for equal light) means more comfortable working conditions. Every employee sees better — feels better — works better!
- PROPER SHIELDING FOR GOOD VISION**—Closed reflector ends and proper cut-off shields eyes. M1616W's deep reflector design provides a 72½° angle of cut-off from the bottom of the Fluorescent lamp — the accepted standard of good lighting practice — which, together with closed reflector ends, insures adequate shielding to hide lamps from view at normal angles of vision.
- DURABLE ALZAK REFLECTOR**—Durable ALZAK reflector is virtually permanent, proven by actual tests since its advent eight years ago. The efficiency is sustained. ALZAK is unaffected by heat or normal atmospheric conditions. It is easily restored to initial efficiency by washing with soap and water.
- MADE IN FOUR SIZES**—Utility Fluoflectors are made in four sizes, for two, three and four 40-Watt lamps and two 100-Watt lamps. Higher light-intensities are possible. Utility Fluoflectors can be used for general illumination throughout areas or can be used for localized lighting over benches, machines, etc.
- FOR CONTINUOUS RUNS**—Vertical flat ends allow for butting fixtures end-to-end for continuous runs. Knockouts in each end for fastening fixtures together. End-to-end mounting provides more even illumination and higher light intensities.
- POWER FACTOR AND FLICKER CORRECTION**—Power Factor and flicker correction are made possible in M1616W, M1624W and M1950W by use of "split-phase" principle of the Tu-lamp ballast. M1888W is available with three single-lamp-ballast to operate on off-phases of three-phase system.
- SEPARATE STARTER SWITCHES**—Separate starter switches simplify wiring and facilitate switch-trouble location. Starter switches are replaceable, and Utility Fluoflectors are constructed so easy access to these switches is assured.
- RUGGED CONSTRUCTION**—Outer steel housing of Utility Fluoflector is a rugged protector for the efficient ALZAK reflector. The steel housing is of 20 U. S. gauge steel, is Galvanic, rust-protected, and is finished in chipless Grey Enamel. Ends are welded direct to the housing.
- "BEST FLUORESCENT BUY"**—Made right, Utility Fluoflector will give maximum service under normal factory conditions. Outer steel protector housing contains all the accessories, leaving the ALZAK reflector entirely free for easy removal to insure best maintenance. Utility Fluoflector is "your best Fluorescent buy"!

**— Guth-M1616W —**

FOOT-CANDLE READINGS — FOR FIXTURE — ALSO CONTINUOUS RUNS

AT RIGHT ANGLE TO LAMPS					PARALLEL WITH LAMPS					LAMP WATTAGE	
4	12	28	60	85	65	30	15	4		2-40	4'
10	26	48	82	115	49	29	17	5		CONT.	5'
5	14	24	45	60	29	17	5			2-40	↓
11	30	47	73	92	38	24	14	6		CONT.	6'
7	15	23	38	42	38	24	14	6		2-40	↓
13	33	44	68	82	28	20	12	6		CONT.	8'
6	16	22	28	30	28	20	12	6		2-40	↓
10	28	42	52	56	21	13	7	4		CONT.	10'
4	10	15	20	23	21	13	7	4		2-40	↓
5	22	31	39	44	21	13	7	4			
8'	6'	4'	2'	0'	2'	4'	6'	8'			

### LIGHTING DATA

Foot-candle readings above are for individual units and for continuous runs with standard M1616W using new 40-Watt white Fluorescent lamps on 120-volts. To determine approximate lighting results under M1888W, multiply above figures by 1.45. When daylight Fluorescent lamps are used, multiply readings under white lamps by .85.

### EGG-CRATE LOUVRES



The Utility provides a better than average degree of light cut-off (72½° from bottom of lamp). However, when an application requires additional lamp shielding, this can be accomplished with the new Guth Egg-Crate Louvres. The Egg-Crate Louvres have a 45° light cut-off and can be used on two or three—forty watt units. These louvres have a baked aluminum finish to reduce surface brightness; they have welded joints for rigidity.

Guth Egg-Crate Louvres fit easily and snugly in the fixture. They are quickly inserted or removed for convenient maintenance. Small notched arms, extending from the ends of the two long baffles, fit into small slots cut in the end plates of the fixture. The Egg-Crate Louvre, M2072, is made of heavy gauge steel and lists at \$6.00 each when packed, five to a Carton (or \$7.25 when purchased in quantities less than five).



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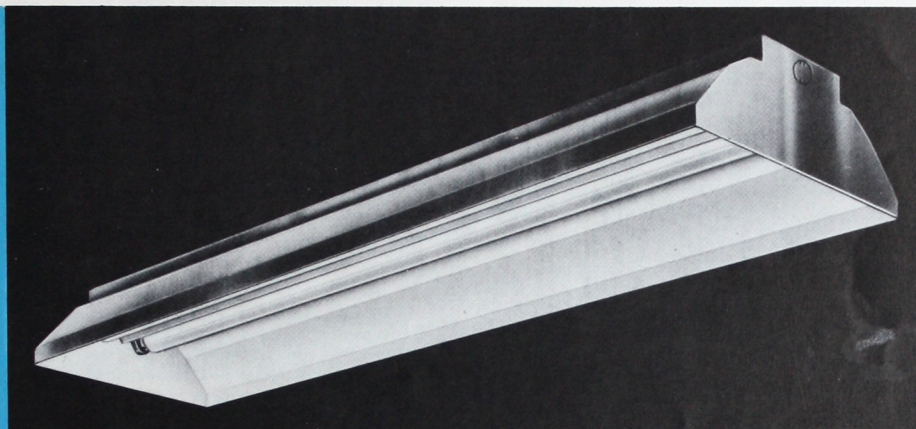


# UTILITY FLU-O-FLECTOR

LISTED BY UNDERWRITERS' LABORATORIES, INC.

*For General and Localized Quality Industrial Lighting*  
*Detachable ALZAK Reflector*

12  
LIGHTING  
EXTRAS



"INDUSTRY'S  
BEST  
BUY"

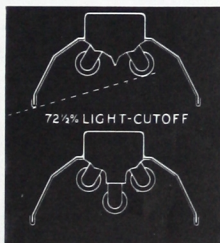
Cat. No.	Lamp Wattage	Power Factor	Body Size	Shp. Wt.	List Price
M1616W	2-40W	95-100%	48 1/2 x 11 x 7 1/2"	27#	\$30.15
M1888W*	3-40W	Av. 92%	48 1/2 x 11 x 7 1/2"	31#	41.35
M1624W	4-40W	95-100%	48 1/2 x 18 1/2 x 7 1/2"	51#	54.65
M1950W	2-100W	95-100%	60 1/2 x 13 x 8"	45#	60.00

NOTE: Above units for operation on 110-125 V. 60 Cycle, A. C. Also available for 220-250 V. Same list prices.

\*For approximate 80% Average Power Factor deduct \$2.80 list.

For vital seeing conditions in industry, more illumination at lower operating cost is now available with the new low-cost Utility FLU-O-FLECTOR for two, three or four 40-Watt Fluorescent lamps. The reflecting surface is durable ALZAK aluminum of engineered design and diffuse finish to provide excellent vertical as well as horizontal illumination.

**ALZAK REQUIRED** — The Fluorescent lamp is a diffusing type of light source that requires a "punch" reflector to deliver maximum effectiveness. ALZAK aluminum provides this added "punch" necessary for really effective Fluorescent lighting.



Light Cut-Off for M1616W is 72 1/2% in line from bottom of the lamp. (recommended by Nela Park). M1888W (three-light) produces approximately 45% more light than does M1616W (two-light).

**DESCRIPTION:** Prices include full freight allowance of 100# single lot shipments for United States Continent destination. Outer protective housing is of 20 U. S. gauge steel, galvanized rust-protected, and finished chipless Modern Gray Enamel. Mounting holes for conduit or chain mounting are on 25" centers. Steel ends are welded direct to outer steel housing. Removable inner reflector is of heavy gauge aluminum, etched for diffusion, and processed ALZAK for efficiency and permanency. Prices include FLU-O-FLECTORS wired, complete, ready to install, and are listed by Underwriter's Laboratories, Inc. Prices are less lamps. If M1888W is desired with three single-lamp High-Power-Factor ballasts for 110-125 volt, 60 cycle, A. C., add \$2.00 list per unit.

Thousands of Utility FLU-O-FLECTORS have been installed. Below are photographs of several large installations showing typical uses for both general and localized illumination. Utility FLU-O-FLECTORS are "Industry's Best Fluorescent Buy."



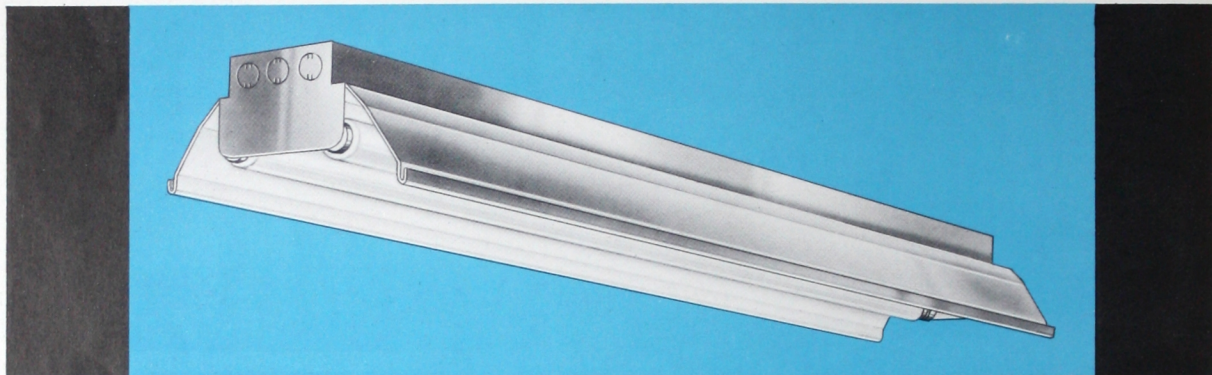


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MODERN LIGHTING . . .

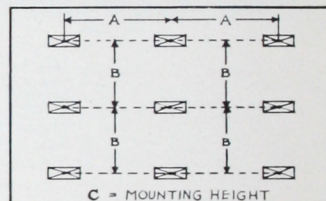
## Guth FLU-O-FLECTORS . . . SYMMETRIC AND ASYMMETRIC

*For Commercial and Industrial Installations — Shielded — Directed Lighting*  
*Removable ALZAK Reflectors*



M1656W SHOWN ABOVE—OTHER TYPES LISTED ON FOLLOWING PAGE

**FLU-O-FLECTORS**—Symmetric and Asymmetric—are available for various lamp sizes to accommodate any lighting condition. At the bottom of this page are three typical lighting installations. When used for general illumination, proper layout and mounting height will provide uniform illumination of proper intensity. To right are two suggested spacings and mounting heights. Under plan No. 1, M1656W will provide 20-25 foot-candles, and will provide 18-23 foot-candles on plan No. 2, figures based on use of white Fluorescent lamps. Just multiply readings by .85 when daylight lamps. When FLU-O-FLECTORS are used in offices, it is recommended that "P-F-C" Plastic Diffusers be "snapped-on" the lamps (see pages 14 and 15).

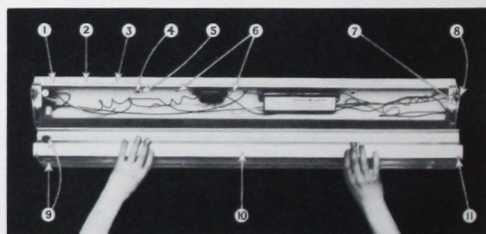


The rectangles in plan above represent M1616W Utility Fluoflector. Plan No. 1: Dimensions A = 10 ft.; B = 10 ft.; C = 10 ft. Plan No. 2: Dimensions A = 10 ft.; B = 12 ft.; C = 12 ft. See description to left.

### REMOVABLE REFLECTORS —Protected Sockets

To left are light curves as follows: Top, for M1648W to 54W. Second from top, for M1656W to M1662W. Bottom, for M1876W to 78W.

FLU-O-FLECTORS are built to endure, utilizing 20 U. S. gauge steel channel and removable ALZAK reflector with reinforced turned-back edges which also are a safety factor, eliminating possibility of injury. Lamp-holders are protected and assured of upright position by welded-on heavy steel end-caps. Other features for Guth general construction are described in detail on page 13.



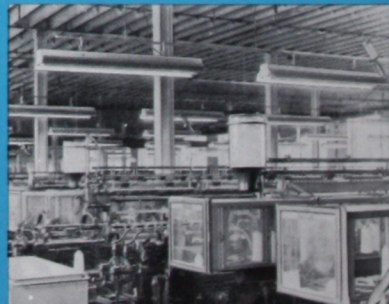
The even illumination provided here by Guth Symmetric FLU-O-FLECTORS decreases eye strain—increases efficiency. The welded-on ends provide added lamp shielding.



**FOR OFFICES:** FLU-O-FLECTORS installed in General Motors Acceptance Corporation offices provide 35 foot-candles. When used in offices, it is suggested that "P-F-C" Plastic Diffusers be used.



**FOR FACTORIES:** 178 M1656W's installed in the Claussner Hosiery Mill, Paducah, Kentucky. Forty foot-candles of Daylight color-quality is delivered on the machinery-needles.





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# **Guth FLU-O-FLECTORS ... SYMMETRIC AND ASYMMETRIC**

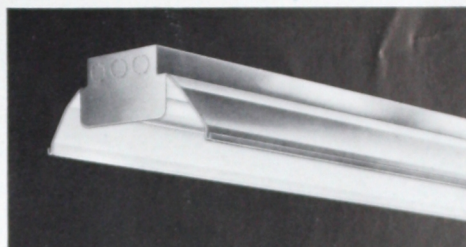
*Protected Upright Lampholders — For Localized or General Illumination  
Removable ALZAK Reflectors*

**F**LU-O-FLECTORS—Symmetric and Asymmetric—for multiplicity of uses—are made for numerous lamp sizes to solve virtually all illumination problems. In factories, FLU-O-FLECTORS are used for localized lighting over benches, presses, shears, etc. Also they are used for general factory illumination. In stores, FLU-O-FLECTORS are used in show windows and over rug displays and wall-cases. In offices, FLU-O-FLECTORS can be effectively used for general illumination, particularly when "P-F-C's" are snapped on the lamps, (see pages 14 and 15). FLU-O-FLECTORS are designed to shield the light source and direct same to most useful working planes. Reflectors are efficient ALZAK aluminum, do not tarnish or discolor with age. Reflectors are removable for easy washing and for access to accessories in the heavy steel channel. FLU-O-FLECTORS are finished Modern Gray Enamel and Aluminum.

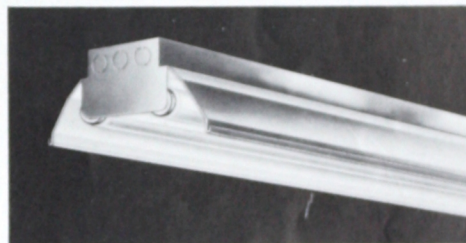
Cat. No.	Lamp Wattage	Width	Height	Shg. Wt.	List Price
M1648W	1-40W	8 $\frac{3}{4}$ "	4 $\frac{5}{8}$ "	14#	\$18.85
M1650W	1-30W			12#	17.20
M1652W	1-20W			8#	13.65
M1656W	2-40W			18#	23.65
M1658W	2-30W			16#	21.90
M1660W	2-20W			10#	17.70
M1876W	2-40W	8 $\frac{3}{4}$ "	7"	19#	23.65
M1880W	2-20W			11#	17.70

LISTED BY UNDERWRITERS' LABORATORIES, INC.

Prices include freight allowance on 100# single lot shipments to United States continent destination. Fixture lengths are  $\frac{1}{8}$ " longer than lamp lengths. Units listed above are Power Factor corrected for 90% or better and include listing by Underwriters' Laboratories, Inc. They are wired complete for 110-125 volt, 60 cycle A. C. ballasts, starting compensators (where required) and separate starter switches. Mounting nipples are on 10" centers. The 36" and 48" units have K.O.'s on 25" centers as well.



ONE LITE SYMMETRIC—M1648W-52W

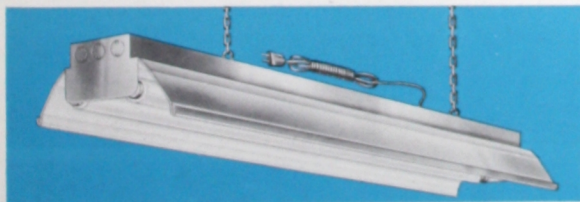


TWO LITE SYMMETRIC—M1656W-60W



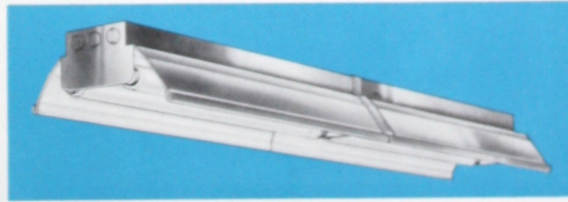
TWO LITE ASYMMETRIC—M1876W-80W

## **FLU-O-FLECTOR EXTRA-PARTS**



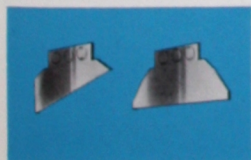
**JACK-CHAIN HANGER—CORD AND PLUG**

FLU-O-FLECTORS listed above will be supplied wired complete with 4' reinforced cord and plug, ready to plug in, also with 3' chain and loops. When ordering, specify M1883 assembly. Add \$2.50 list per unit. This assembly is not listed by Underwriters.



**JOINER STRIPS**

When installing FLU-O-FLECTORS in continuous mounting, it is desirable to use joiner strips to align the reflectors. Catalog No. M1884 for symmetric type, and M1885 for asymmetric type list at 50c each, finished aluminum.



**CLOSED-ENDS**

FLU-O-FLECTORS can be obtained with completely closed ends, if desired. Ends are finished Modern Gray Enamel to match channel portion. Specify M1886 for symmetric type and M1887 for asymmetric type. Each end lists at \$2.50.

**OTHER PARTS**

Hangers, brackets and hanger fittings for FLU-O-FLECTORS are available. See page 12 for prices.





## FLU-O-FLECTORS...FOR SHOW WINDOWS



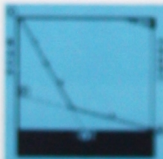
Installation in Richard's, Inc., Joplin, Missouri, with three-row lamp Fluoflectors positioned for shallow windows. Approximately 100 square foot area, 7' ceiling, 480 lamp wattage. Two outside lamp rows are white and middle lamp row is daylight. Foot-candles in zone "A" are 85; at zone "B" are 55; at zone "C" are 35.



Guth FLU-O-FLECTORS in shallow position installed at Leggett's Computer Retail Store, Worcester, Massachusetts. Guth foot-lamp-rows installed on 8' ceiling, with daylight lamps used. At eye level, over 300 foot-candles are delivered and 330 foot-candles delivered at the floor.



Installation at S. H. George & Sons Department Store, Knoxville, Tennessee. Three 50,000W positioned for deep windows, installed in rows 7' x 12' with 8' ceiling. White lamps deliver 60 foot-candles at zone "B."



SHOW WINDOW "TRIM-LINES"

To right is diagram showing divisional "TRIM-LINES." Line "XY" is from top back of window to center of floor. Line "OM" is from bottom front to top back. This leaves three zones, "A," as shown, and "B" and "C," one-half the distance on line "XY" from direction.



FOR DEEP WINDOWS



FOR SHALLOW WINDOWS

SAME FLU-O-FLECTOR

ILLUSTRATED above are two Show Windows, one Deep Type (4'6" to 7'0" deep), and one Shallow Type (2'0" to 4'0" deep). In each is shown a Guth FLU-O-FLECTOR providing full "Light-Coverage." The only difference in the FLU-O-FLECTORS is POSITION OF THE ALZAK REFLECTOR—the fixture is the same. It is, therefore, possible to adjust Guth "Turn-Around" reflectors to suit your requirements. Only 5 minutes is required to do this—the wiring is not touched. For extra deep-type windows (7'6" to 10'0") it may be desirable to supplement lighting with TROFFER FLU-O-FLECTORS (see page 11).



There's Added Punch With

**ALZAK  
FLU-O-FLECTORS**

Some Windows Require This  
"ADDED PUNCH"

Lighting for Show-Windows requires "ADDED PUNCH" and inasmuch as the Fluorescent lamp is a diffusing light-source as compared to the Incandescent lamp, the reflectors must do a "double duty" job of supplying this needed "punch." Insist on ALZAK aluminum reflectors to do this job.

### LIGHTING DATA

Lighting intensities and lamp color selection should depend a lot on the merchant's neighbors. Primary object for Show-Window lighting is, (1) to gain attention, (2) hold interest. Daylight color lamps or combination—white and daylight—are often desirable to "gain attention," even though all white lamps produce 18% more light. Distinctive color (with intensity) gains attention, while higher lighting intensities "hold interest."

FLU-O-FLECTORS installed in Best's Shoe Store, Wichita, Kansas. 50,000W and 30,000W with three rows of Fluorescent lamps are used. Reflectors are positioned for shallow windows to deliver 60 foot-candles at floor level. Windows are unusually attractive in their bright Daylight color.





ALZAK IS MORE EFFICIENT  
... ALZAK IS PERMANENT

GUTH  
ALZAK



# SHOW WINDOW FLU-O-FLECTORS

*For Deep and Shallow Windows — All Sizes — Unit Lengths*  
*"Turn-Around" ALZAK Reflectors*

"TURN-  
AROUND"  
LIGHT  
FEATURE



ALZAK  
GIVES  
"PUNCH"  
LIGHT

LISTED BY UNDERWRITERS' LABORATORIES, INC.

FLU-O-FLECTORS for Show Windows provide dynamic sales lighting for "3-Second Selling." Show Windows require "punch" lighting that makes merchandise sparkle with life-giving realness—that is why Guth FLU-O-FLECTORS are equipped with ALZAK reflectors—to give all "punch" possible for Fluorescent lamps.

There are two types of show windows, the Deep type and the Shallow type. FLU-O-FLECTORS accommodate both with improved "turn-around" reflector feature. The new, improved "turn-around" ALZAK reflectors are simply and quickly serviced or removed without disturbing the position of the fixture or altering the wiring. Removing knurled nuts releases the reflector and it slides out easily. Reset movable socket mounting bar for correct lamp position and turn-around reflector.

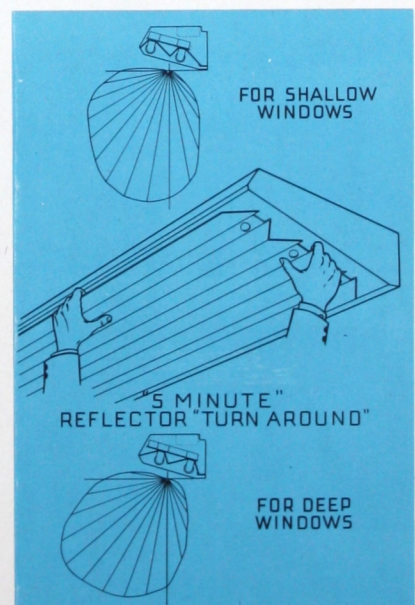
Cat. No.	Lamp Wattage	Depth and Width†	Shg. Wt.	How Ship.	List Price
M1681W	2-20W	5½ x 9½"	12#	Wired	\$19.10
M1682W	2-30W		21#	Wired	22.95
M1683W	2-40W		24#	Wired	24.80
M1908W*	2-100W	8 x 18"	50#	Wired	60.00
M1920W*	2-65W		—	Wired	—
M1686W**	3-20W	6½ x 13½"	19#	Wired	29.00
M1687W**	3-30W		30#	Wired	35.55
M1688W**	3-40W		37#	Wired	38.50
M1691W	4-20W	7¾ x 18"	27#	Wired	37.50
M1692W	4-30W		44#	Wired	44.40
M1693W	4-40W		51#	Wired	48.30

\*Two 100-watt units are available in limited quantities until ballast production is increased. The 65-watt accessories are expected to be announced soon.

\*\*For approximate 80% Average Power Factor deduct \$2.80 list.

†Fixture lengths are ½" longer than lamp assembly lengths.

**DESCRIPTION:** Exterior made of heavy gauge steel finished Modern Gray Enamel. "Turn-around" reflectors are made of genuine ALZAK aluminum engineered to perform correct lighting for both deep and shallow windows. Unless reflector position is specified, same will be shipped for Deep-Type Windows; however, this position can be easily changed on the job to suit your conditions. WIRED units are listed by Underwriters' Laboratories, Inc., and include high Power Factor ballast for 110-125 volt, 60 cycle A. C., starting compensators (where required) and removable starter switches. All prices are less lamps.





## Guth SHOWCASE FLU-O-FLECTORS

*For Standard Cases Up to 10' — Provide Complete "Light Coverage"  
Efficient ALZAK Reflectors*

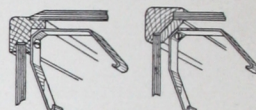
### ● Showcase Flu-O-Flector — M1918W

FLU-O-FLECTORS provide full "light-coverage" of the entire show-case area with their efficient ALZAK reflectors. ALZAK reflectors are furnished to provide more light and more effective "punch" light on the merchandise display. The low wattage Fluorescent lamps deliver more light with 75% less heat, making them extremely effective where perishable products are displayed, and coolness is desired. New type sockets are furnished for easy lamp installation and removal. FLU-O-FLECTORS are small in design and deliver maximum light where it is needed.

Unless specified for right-hand outlets, standard fixtures will be supplied furnished with fitting out of left side (from back of show-case) as illustrated above.

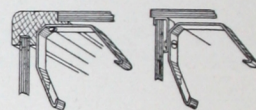
Cat. No.	Lamp Sizes 18" 36"	Fixture Length	For Show- Case Size	Shg. Wt.	List Each
M1912W	1 —	24"	3'	8#	\$14.65
M1914W	— 1	42"	4' and 5'	14#	16.70
M1916W	1 1	62½"	6' to 8'	22#	26.85
M1918W	— 2	81"	7' to 10'	28#	29.50

**DESCRIPTION:** FLU-O-FLECTORS are of rigid steel construction, hand-somely electroplated statuary bronze. Prices of above include fixtures wired complete with High Power Factor ballast for 110-125 volt, 60 cycle, A. C., starting compensator where required, and separate starter switches. Prices are less lamps. Standard fittings, 36" down-tube, 30" of flexible cable, and ballast housing all included in the above prices. Type hangers, see copy to left, should be specified when ordering. Mitred corners and special finishes available, prices upon request.



● Type A

● Type B



● Type C

● Type D

FLU-O-FLECTORS are designed so lamps are concealed from view of the customer and also from the clerk behind the counter. Hanger Types A, B, and C are for Universal fittings and are furnished standard unless Type D is specified.

### Trade Avenues

are "keyed" in stores where merchandise in cases are illuminated with Guth Showcase Flu-O-Flectors. Photo to left shows Guth units installed in large dry-goods establishment.

### Increased

eye appeal is provided when selling displays are illuminated with Fluorescent Lighting as in the photo at right. This installation of SHOWCASE and WALLCASE FLU-O-FLECTORS was made for the Ecker Studio at Salt Lake City, Utah.



## Guth ALL-ANGLE WALLCASE FLU-O-FLECTORS

FLU-O-FLECTORS for Wall-Cases, Island and Niche displays are available with unique housing designed to make possible mountings on walls at various angles (see diagram to left). Also, can be mounted on ceiling at various angles. Inner reflector is of genuine ALZAK aluminum, engineered to deliver efficient "tear-drop" lighting distribution.



### ● All Angle Wallcase Flu-O-Flector

Cat. No.	Lamp Size	Lgth.	Shg. Wt.	Price
M1710W	1-15W	18¾"	6#	\$14.65
M1711W	1-20W	24¾"	7#	15.65
M1712W	1-30W	36¾"	11#	19.50
M1713W	1-40W	48¾"	13#	22.45

**DESCRIPTION:** Rigidly constructed of heavy-gauge steel housing with separate ALZAK aluminum reflector. Fixture width and height are 4¾" x 4¾" respectively. Standard finish is aluminum lacquer. Wired complete with High Power Factor ballast for 110-125 volt, 60 cycle, A. C., with separate starter switches. Prices do not include lamps. Toggle switch if desired at \$1.50 list each.



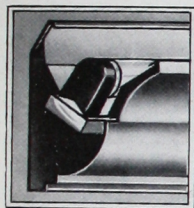
ALZAK IS MORE EFFICIENT  
... ALZAK IS PERMANENT

**GUTH**  
**ALZAK**

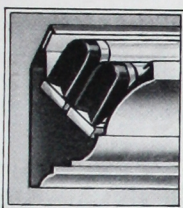


## COVE FLU-O-FLECTORS

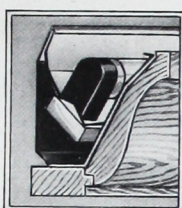
*For Concealed or Exposed Mounting . . . One or Two Rows of Lamps*  
*Efficient ALZAK Reflectors*



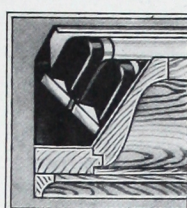
● No. M1705  
Exposed Type



● No. M1706  
Exposed Type



● No. M1707  
Concealed Type



● No. M1708  
Concealed Type

Excellent cove lighting effects with Fluorescent lamps are possible in small rooms, offices, reception rooms and stores. Cove-type FLU-O-FLECTORS are available for 18", 24", 36" and 48" size lamps; in single or double row widths, and for exposed or concealed mounting. Inner reflector is genuine non-tarnishing ALZAK aluminum. Exposed types regular finished Statuary Bronze lacquered. Concealed types are Udyllite rust-protected. Mitered corners for exposed types at \$6.00 list each and for concealed types at \$4.00 list each.

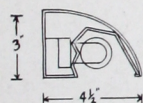
FLU-O-FLECTORS are available WIRED or BARE. Wired units are wired complete with 110 volt, 60 cycle A. C. ballasts (90-100% power factor), Starter Switches (and Compensators when necessary). The concealed type units M1707 and M1708 are shown in illustration above with built-on wood moulding which is not furnished with the fixture. The Concealed Type fixtures are made to nest into this type moulding or into plaster. Fixtures are made into lengths up to 8', with suitable joiner strips to couple lengths together. Prices do not include lamps.

Cat. No.	For Lamps	O. A. Wdth.	O. A. Hgth.	Base Lgth.	Base Length List Price Wired	Additional Lamp Length List Price Wired	Shg. Wt. in Ft. Wired
M1705AW	1-15	4 1/4"	4 5/16"	19"	\$19.60	\$15.30	5#
M1705BW	1-20	4 1/4"	4 5/16"	25"	20.50	16.90	5#
M1705CW	1-30	4 1/4"	4 5/16"	37"	25.10	21.50	6#
M1705DW	1-40	4 1/4"	4 5/16"	49"	29.30	25.80	6#
M1706AW	2-15	5 1/4"	7"	19"	\$29.70	\$25.20	5 1/2#
M1706BW	2-20	5 1/4"	7"	25"	31.20	26.20	5 1/2#
M1706CW	2-30	5 1/4"	7"	37"	35.05	30.55	6#
M1706DW	2-40	5 1/4"	7"	49"	39.25	34.75	6#
M1707AW	1-15	4 3/8"	3 3/4"	19"	\$17.60	\$14.70	4#
M1707BW	1-20	4 3/8"	3 3/4"	25"	19.10	16.10	4#
M1707CW	1-30	4 3/8"	3 3/4"	37"	24.10	20.60	5#
M1707DW	1-40	4 3/8"	3 3/4"	49"	27.80	24.80	5#
M1708AW	2-15	5 1/4"	6"	19"	\$27.00	\$24.20	5#
M1708BW	2-20	5 1/4"	6"	25"	28.50	25.50	5#
M1708CW	2-30	5 1/4"	6"	37"	33.10	29.20	6#
M1708DW	2-40	5 1/4"	6"	49"	36.90	33.40	6#

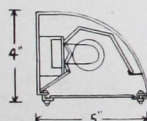


## BANK CAGE FLU-O-FLECTORS

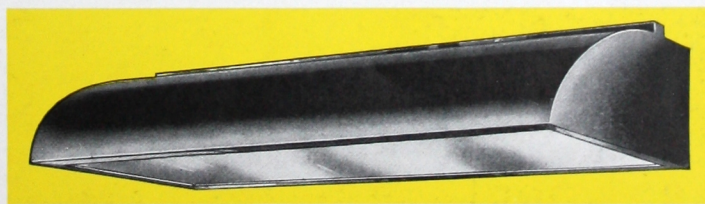
*For 18", 24", 36" and 48" Lamps . . . Open and Diffusing Glass Types*  
*Reflectors ALZAK Aluminum*



● Open Type



● Diffusing Type



● Bank Cage Flu-o-flector—Available With Open or Diffusing Glass Bottom

BANK-CAGE FLUOFLECTORS have genuine ALZAK reflectors correctly designed to deliver maximum light output. Available with open reflector or diffusing glass cover; latter type has removable frame for easy relamping. Made for all sizes of Fluorescent lamps. Accessories placed in back of ALZAK reflector. Reflector cover made of brass or steel. Standard finishes can be obtained. Unless specified Guth Bank Bronze will be furnished; finish on brass is electroplated and finish on steel is lacquered. A pull-switch is supplied at right end of fixture. Prices below are less lamps but include 110-volt, 60-cycle, A. C. ballast and separate starting switch.

### BANK CAGE FLU-O-FLECTORS—Open Type Made of Steel

Cat. No.	Lamp	O. A. Lgth.	Price	Cat. No.	Lamp	O. A. Lgth.	Price
M1926W	18"	19"	\$19.80	M1930W	18"	19"	\$21.80
M1927W	24"	25"	20.80	M1931W	24"	25"	23.80
M1928W	36"	37"	25.00	M1932W	36"	37"	28.50
M1929W	48"	49"	28.00	M1933W	48"	49"	32.00

Available in continuous lengths—Prices upon request.

### BANK CAGE FLU-O-FLECTORS—Diffusing Glass Type Made of Brass

Cat. No.	Lamp	O. A. Lgth.	Price	Cat. No.	Lamp	O. A. Lgth.	Price
M1934W	18"	19"	\$24.80	M1938W	18"	19"	\$27.80
M1935W	24"	25"	26.80	M1939W	24"	25"	29.80
M1936W	36"	37"	30.00	M1940W	36"	37"	35.00
M1937W	48"	49"	35.00	M1941W	48"	49"	40.00

Available in continuous lengths—Prices upon request.





*Awarded to*  
**Edwin F. Guth**

*A Modern Pioneer on the Frontier of American Industry, in recognition  
of distinguished achievement in the field of science and invention  
which has advanced the American standard of living.*

*February, 1940*

*Karl T. Compton*

CHAIRMAN, COMMITTEE ON  
MODERN PIONEER AWARDS

